SHARP SERVICE MANUAL

No. 00ZUX81AATSME

FACSIMILE

MODEL UX-81A UX-85A FO-452

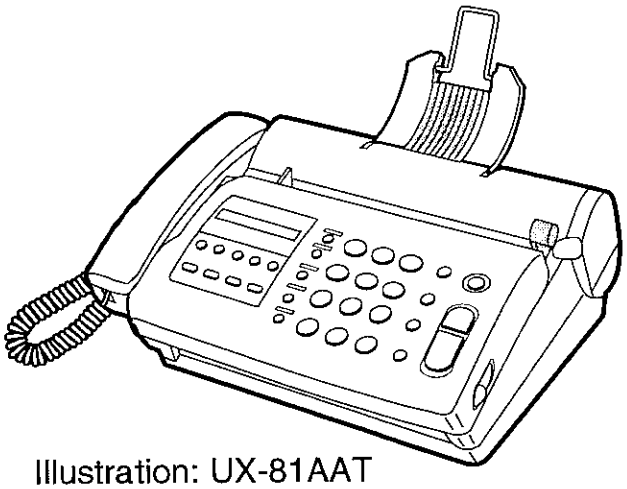

Illustration: UX-81AAT

Non Cutter model	Cutter model
UX-81AAT/ABE/ACH/ AES/AIT/ANL/ASE	UX-85AIT FO-452IT

MODEL	COUNTRY
AT	Austria
BE	Belgium
CH	Switzerland
ES	Spain
IT	Italy
NL	Netherlands
SE	Sweden

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PARTS GUIDE

Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after-sales service only.
The contents are subject to change without notice.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's
instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CHAPTER 1. GENERAL DESCRIPTION

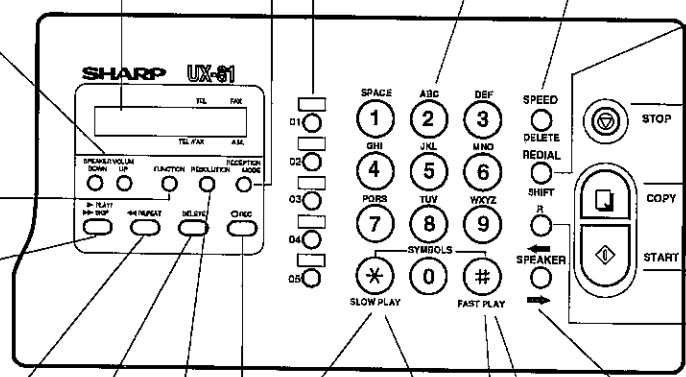
[1] Specifications

Applicable telephone line:	Public switched telephone network /PBX
Compatibility:	ITU-T (CCITT) G3 mode
Configuration:	Half-duplex, desktop transceiver
Compression scheme:	Modified Huffman and Sharp special mode
Scanning method:	Flat-bed, solid-state CCD
Resolution:	Horizontal: 8 dot/mm Vertical: Standard — 3.85 lines/mm Fine/Halftone — 7.7 lines/mm
Recording system:	Thermal recording
Display:	7 x 5 dots, 1 line by 16-digit display
Reception modes:	FAX, TEL, TEL/FAX, A.M.
Modem speed:	9600 bps with automatic fallback to 7200, 4800, or 2400 bps
Transmission time* :	Approx. 20 seconds (Sharp special mode)
Effective recording width:	210 mm, max.
Input document size:	Automatic feeding: Width — 210 to 216 mm Length — 128 to 297 mm Manual feeding: Width — 210 to 216 mm Length — 128 to 1000 mm
Effective scanning width:	210 mm, max.
Automatic document feeder:	15 sheets max.
Halftone (gray scale):	16 levels
Contrast control:	Automatic/Dark selectable
Copy function:	Standard
Telephone function:	Standard (cannot be used if power fails)
Noise emission:	Less than 70 dBA (Measured according to DIN 45635.)
Power requirements:	220–230 V AC, 50 Hz
Operating temperature:	5 to 35°C
Power consumption:	Stand-by: 8.5 W Maximum: 120 W
Dimensions:	Width: 323 mm Depth: 262 mm Height: 117 mm
Weight:	Approx. 3.1 kg

* Based on ITU-T (CCITT) Test Chart #1 at standard resolution in Sharp special mode, excluding time for protocol signals (i.e., ITU-T phase C time only).

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

[2] Operation Panel



RECEPTION MODE key
Press this key to select the mode of reception. An arrow in the display will point to the mode selected.

Number keys
Use these keys to dial numbers, and enter numbers and letters during number/name storing procedures.

Liquid crystal display
This displays various messages during operation and programming.

Rapid keys
Use these keys to dial fax and voice numbers automatically. Rapid key 01 (indicated by the blue logo) also serves as an access key when using the Mercury Service.

SPEED key
Press this key to dial a number by entering a 2-digit Speed Dial number. It also functions as a delete key when storing a number or name.

REDIAL key
Press this key to automatically redial the last number dialled. It can also be used to shift between upper and lower case letters when storing a name.

SPEAKER VOLUME keys
After pressing the **SPEAKER** key, press the **UP** key to turn the volume of the speaker up, or the **DOWN** key to turn it down.

STOP key
Press this key to stop operations before they are completed.

FUNCTION key
Press this key to select various special functions.

COPY key
Press this key to make a copy of a document.

PLAY/SKIP key
Press this key to play recorded messeages. During playback, press it to skip forward to the next message.

START key
Press this key to send or receive a document.

R key
If you are on a P.B.X. extension, press this key to transfer or put the other party on hold. It can also be used to move the cursor to the left when storing a number or name.

REPEAT key
Press this key to repeat playback of a message.

SLOW PLAY key
Press this key to reduce the speed of message playback.

FAST PLAY key
Press this key to increase the speed of message playback.

DELETE key
Press this key to erase recorded messages.

REC key
Press this key to recorde an outgoing message ,a phone conversation or a message to other users of the machine.

SPEAKER key
Press this key to dial a number without picking up the handset. It can also be used to move the cursor to the right when storing a number or name.

RESOLUTION key
Press this key to adjust the resolution and contrast before sending or copying a document.

Symbol keys
Press either of these keys to select a special symbol when storing a name.

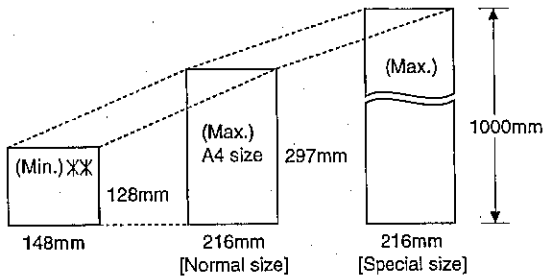
• Panel Description

(UX-81ABE/AES/AIT/ANL/ASE/85AIT/452IT)	(UX-81AAT/ACH)
Rapid keys	Zeilwahitasten
Liquid crystal display	LCD-Anzeige
Number keys	Zifferntasten
SPEED key	Taste KURZWAHL
STOP key	Taste STOP
REDIAL key	Taste WAHLWIEDERH.
SPEAKER VOLUME keys	Tasten LAUTSTÄRKE
FUNCTION key	FUNKTION Taste
RESOLUTION key	Taste AUFLÖSUNG
Symbol keys	Symbol tasten
R key	Taste R
RECEPTION key	Taste MODUS
COPY key	Taste KOPIE
START key	Taste START
SPEAKER key	Taste LAUTSPR.
PLAY/SKIP key	WIEDERG./VOR.
REPEAT key	ZURÜCK
DELETE key	LÖSCHEN
REC key	AUFN.
SLOW PLAY key	-
FAST PLAY key	+

[3] Transmittable Documents

1. Document Sizes

Normal size	Width	148 – 216 mm
	Length	128 – 297 mm



※※ Use document carrier sheet for smaller documents.

* With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

Normal size	ADF 10 sheets	Thickness	0.06–0.12 mm
		Weight	52–104g/m^2
	ADF 15 sheets	Thickness	0.06–0.09 mm
		Weight	52–74.3g/m^2
Special size		Thickness	0.12–0.20 mm
		Weight	52–157 g/m^2

3. Document Types

- Normal paper

  Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted. Documents of normal contrast duplicated by a copying machine can also be transmitted.

- Diazo copy (blue print)

  Diazo copy documents of a normal contrast may be transmitted.

- Carbon copy

  A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. ADF 15 sheets

Special size: single sheet only (manual feed)

NOTES:
- When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.
- Place additional pages carefully and gently in feeder.

  If force is used, double-feeding or a document jam may result.

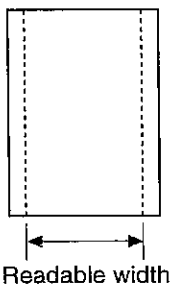
6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

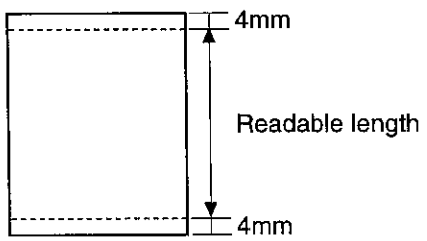
- **Readable width**

210 mm, max.



- **Readable length**

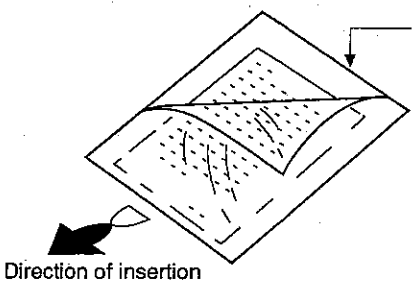
This is the length of the document sent minus 4 mm from the top and bottom edges.



7. Use of Document Carrier Sheet

A document carrier sheet must be used for the following documents.

- Those with tears.
- Those smaller than size 148 mm (W) x 128 mm (L).
- Carbon-backed documents


Make print straight across paper
E.G.
Place the document carrier in the document feeder with the clear film side down
Direction of insertion

NOTE: To transmit a carbon-backed document, insert a white sheet of paper between the carbon back of the document and the document carrier.

- Those containing an easily separable writing substance (e.g., tracing paper written on with a soft, heavy lead pencil).

NOTES:
- When using the document carrier, carefully read the instructions written on the back.
- If the document carrier is dirty, clean it with a soft, moist cloth, and then dry it before using for transmission.
- Do not place more than one document in the carrier at a time.

[4] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine.

  In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 5° and 35°C.
- The humidity should be between 30% and 85% (without condensation).

ELECTRICITY

UX-81AAT/ABE/AES/AIT/ANL/ASE/85AIT/FO-452IT

220–230V, 50Hz, grounded (2-prong) AC outlet is required.

UX-81ACH

220–230V, 50Hz, grounded (3-prong) AC outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

If the machine is moved from a cold to a warm place...

If the machine is moved from a cold to a warm place, it is possible that the reading glass may fog up, preventing proper scanning of documents for transmission. To remove the fog, turn on the power and wait approximately 2 hours before using the machine.

TELEPHONE JACK

A standard RJ-11C telephone jack must be located near the machine. This is the telephone jack commonly used in most homes and offices.

- Plugging the fax machine into a jack which is not an RJ-11C jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or needed to have one installed, contact the telephone company.

If the machine is moved from a cold to a warm place...

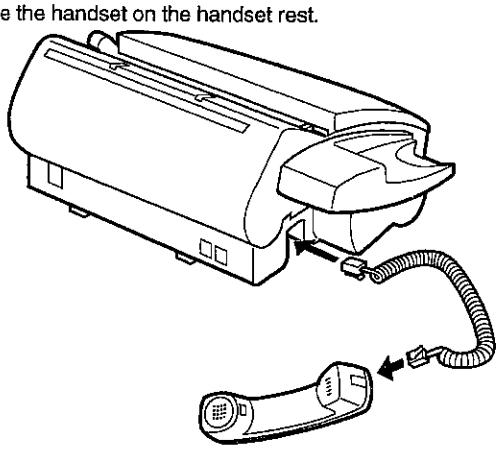
If the machine is moved from a cold to a warm place, it is possible that the reading glass may fog up, preventing proper scanning of documents for transmission. To remove the fog, turn on the power and wait approximately 2 hours before using the machine.

2. Assembly and connections

① Connect the handset cord to the handset and the fax as shown.

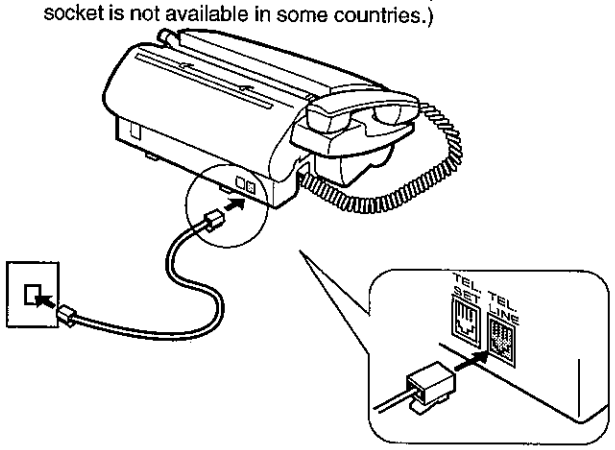
- The ends of the handset cord are identical, so they will go into either socket.

Place the handset on the handset rest.



② Insert one end of the line cord into the socket on the back of the machine marked **TEL. LINE**. Insert the other end into a wall telephone socket.

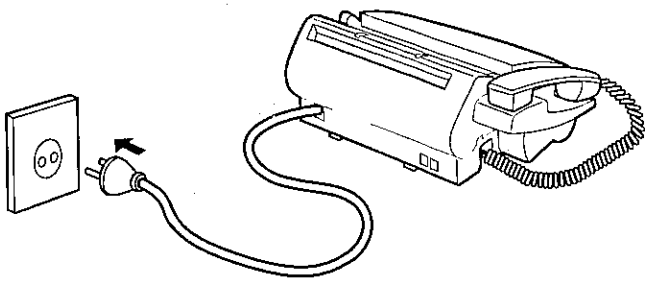
- Be sure to plug the line cord into the **TEL. LINE** socket. **Do not** plug it into the **TEL. SET** socket. (Note: The **TEL. SET** socket is not available in some countries.)



③ Plug the power cord into a 220–230V, 50Hz, grounded (2-prong) AC outlet. (UX-81AAT/ABE/AES/AIT/ANL/ASE/85IT/FO-452IT)

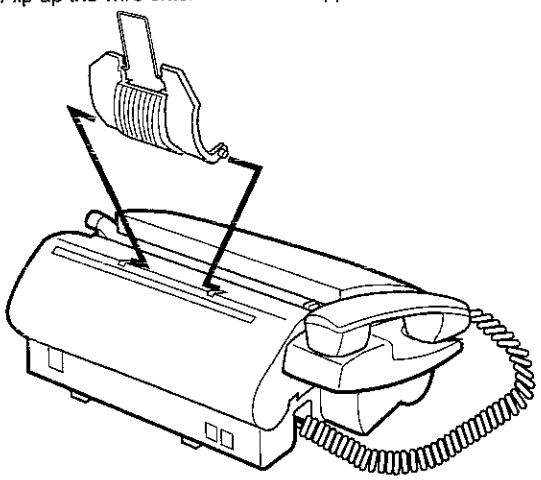
Plug the power cord into a 220–230V, 50Hz, grounded (3-prong) AC outlet. (UX-81ACH)

- **Caution:** The mains outlet (socket-outlet) shall be installed near the equipment and shall be easily accessible.
- The fax does not have a power on/off switch, so the power is turned on and off by simply plugging in or unplugging the power cord.



④ Attach the original document support by inserting the tabs into the holes at the top, rear of the fax.

- Flip up the wire extender on the support.



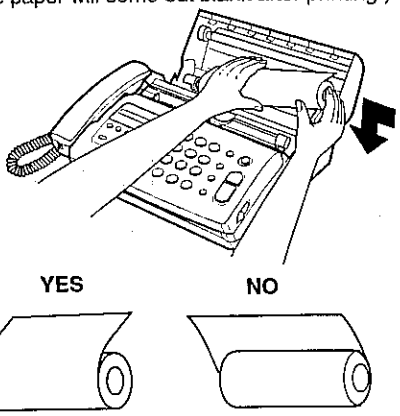
4. Loading the recording paper

① Grasp the finger hold on the front and centre of the paper compartment cover, and pull up to open the cover.
Remove the packing paper from the paper compartment.

- **Caution!** If you are replacing the paper, do not touch the metal strip in the compartment. It may be hot if a document has just been printed.

② Unwrap the roll of fax paper and insert it in the compartment.

- Make sure the hubs on each side of the compartment fit into the ends of the roll. The hub on the left side is mounted on a spring to allow for insertion.
- **Important:** The roll must be placed so that the leading edge of the paper feeds from over the top of the roll. (The paper is only coated on one side for printing. If the roll is placed upside down, the paper will come out blank after printing.)

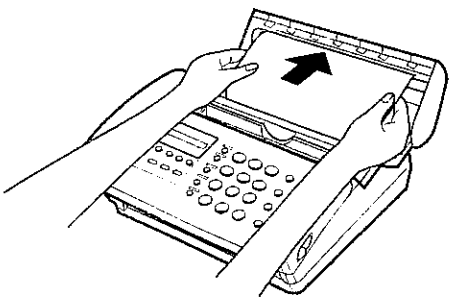


Note: The paper roll provided is only a sample roll which is approximately 15 m long.

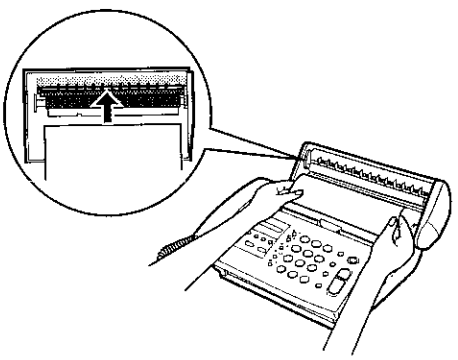
THERMAL PAPER (30 m roll): FO-20PRw

③ Pass the leading edge of the paper under the cutter guide and pull it out through the outlet in the paper compartment cover. Remove any slack.

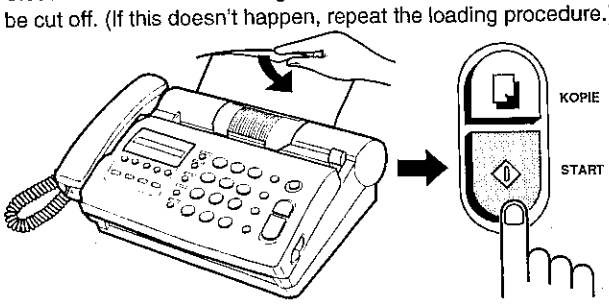
Non cutter model



Cutter model



④ Close the cover. A short length of the fax paper will feed out and be cut off. (If this doesn't happen, repeat the loading procedure.)



[5] Quick reference guide

Use this guide as a convenient reminder for operating the machine after you have read the detailed instructions for each procedure in the manual.

Note:

- Steps which are optional are enclosed in a dotted frame: [ ]

Transmitting documents

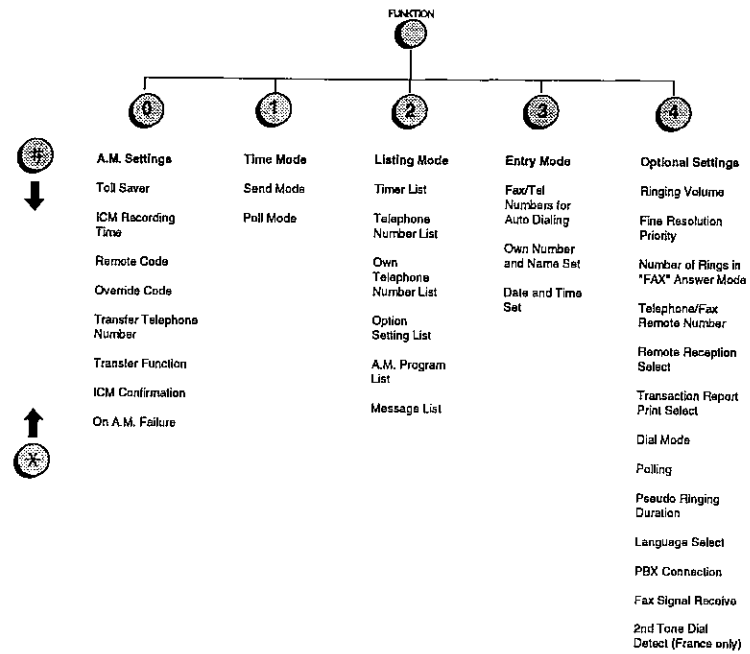
Normal Dialing	Load document → RESOLUTION → Lift handset or press **SPEAKER** → Dial (press numeric keys) → Wait for reception tone → START → Hang up
Direct Keypad Dialing	Load document → RESOLUTION → Dial (press numeric keys) → START
Rapid Key Dialing	Load document → RESOLUTION → Press Rapid key
Speed Dialing	Load document → RESOLUTION → SPEED → Enter Speed Dial number (press 2 numeric keys) → START
Redialing	Load document → RESOLUTION → REDIAL → Wait for reception tone → START

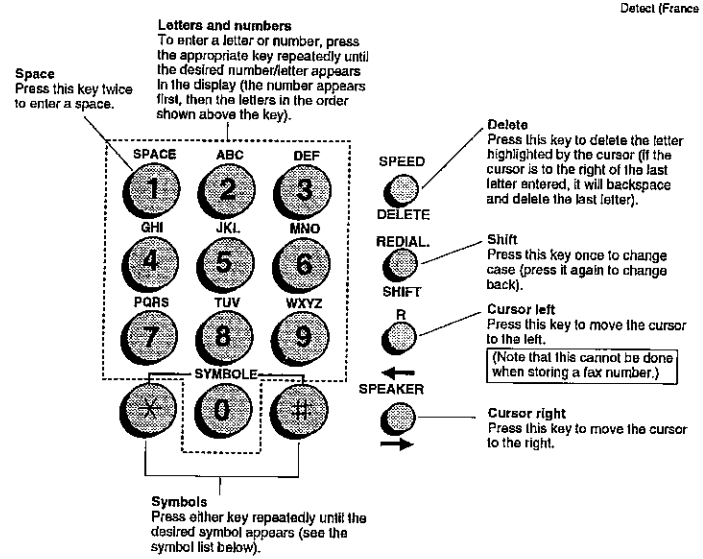
Making voice calls

Normal Dialing	Lift handset or press **SPEAKER** → Dial (press numeric keys) → Lift handset if you pressed **SPEAKER**
Rapid Key Dialing	Lift handset or press **SPEAKER** → Press Rapid key → Lift handset if you pressed **SPEAKER**
Speed Dialing	Lift handset or press **SPEAKER** → SPEED → Enter Speed Dial number (press 2 numeric keys) → Lift handset if you press **SPEAKER**
Redialing	REDIAL → Lift handset

FUNCTION key menu

The following chart shows the layout of the functions and settings accessed by pressing the **FUNCTION** key. First press the **FUNCTION** key, the appropriate numeric key as shown, and then "#" or " ⋊ " until the desired item appears.
Instructions for making each setting appear in the display. If you have any difficulty, refer to the detailed instructions on the page shown below the setting.





CHAPTER 2. ADJUSTMENTS

[1] Adjustments

General

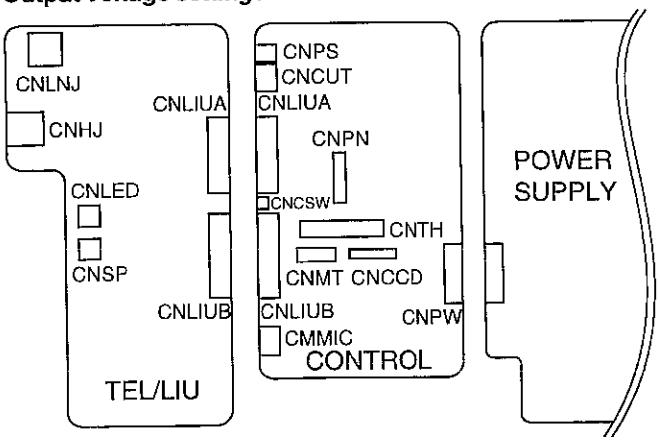
Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

1. Adjustments

Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

Output voltage settings



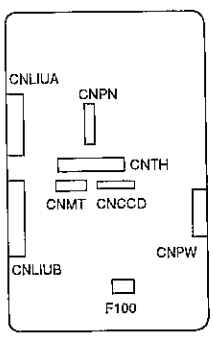
Output	Voltage limits
+5V	4.75V ~ 5.25V
VM (+24V)	23.3V ~ 24.7V

Connector No. / Pin No.	CNPW
1	DG
2	DG
3	+5V
4	VTHON
5	MG
6	MG
7	+24V
8	VTH
9	VTH

2. IC protectors replacement

ICPs (IC Protectors) are installed to protect the motor driver circuit and the plunger drive circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:



(1) FU100 (ICP-S0.7) is installed in order to protect IC's from an overcurrent generated in the motor drive circuit. If F100 is open, replace it with a new one.

3. Settings

(1) Dial mode selector (AT/BE/CH/ES/IT only)

DIAL mode (Soft Switch No. SW-B4 DATA No. 3)

(step 1) Select "OPTION SETTING".

KEY: [FUNCTION] (4)

DISPLAY: [OPTION SETTING] ⟺ [PRESS ✳ OR #]

(step 2) Select "DIAL MODE".

KEY: (#)(#)(#)(#)(#)(#)(#)

Cursor
When initially registering, the mode shows 1=TONE.
When registering again, the mode which was registered formerly is shown.

DISPLAY: [DIAL MODE] ⟺ [1=TONE, 2=PULSE]

(step 3) Select, using "1" or "2".

KEY: (1)

DISPLAY: [TONE SELECTED]

KEY: (2)

DISPLAY: [PULSE SELECTED]

(step 4) End, using the "STOP" key.

KEY: (▽) **STOP**

Note: For UX-70ANL/ASE, the DIAL mode setting is not necessary. (TONE fixed)

[2] Diagnostics and service soft switch

1. Operating procedure

(1) Entering the diagnostic mode

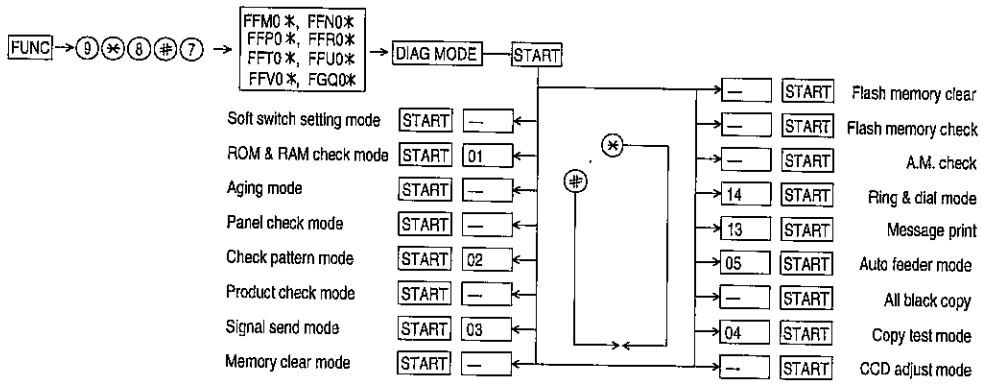
Press [FUNC] → [9] → [✳] → [8] → [#] → [7] , and the following display will appear.

[FFM0✳, FFN0✳, FFP0✳, FFR0✳, FFT0✳, FFU0✳, FFV0✳, FGQ0✳] After 2 sec: [DIAG MODE]

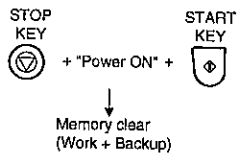
FFM0✳ Identical : 81AAT
FFN0✳ Identical : 81ABE
FFP0✳ Identical : 81ACH
FFR0✳ Identical : 81AES
FFT0✳ Identical : 81AIT
FFU0✳ Identical : 81ANL
FFV0✳ Identical : 81ASE
FGQ0✳ Identical : 85AIT, 452IT

Then press the [START] key and country name selected by country select will appear. Select the desired item with the [✳] key or the [#] key or select with the rapid key. Enter the mode with the START key.

(Diag•specifications)


FUNC → 9 ✳ 8 # 7 →
FFM0✳, FFN0✳
FFP0✳, FFR0✳
FFT0✳, FFU0✳
FFV0✳, FGQ0✳
DIAG MODE
START
Soft switch setting mode START —
ROM & RAM check mode START 01
Aging mode START —
Panel check mode START —
Check pattern mode START 02
Product check mode START —
Signal send mode START 03
Memory clear mode START —
— START Flash memory clear
— START Flash memory check
— START A.M. check
14 START Ring & dial mode
13 START Message print
05 START Auto feeder mode
— START All black copy
04 START Copy test mode
-- START CCD adjust mode

If the dial mode cannot be set, repeat the dial mode operation, performing the following operation.
After the power is turned on and "WAIT A MOMENT" is indicated, press the STOP key.



2. Diagnostic items

ITEM No.	RAPID key	Contents	Function
1	–	Soft switch mode	Display soft SW contents, and changes the setting.
2	01	ROM & RAM test	Checks program ROM 256KByte (2Mbit) and work RAM (8KByte).
3	--	Aging mode	Prints the check pattern at the speed of 1 sheet/5 minutes.
4	–	Panel check mode	Displays the name of key depressed on the operation panel.
5	02	Check pattern mode	Prints 2 sheets of check pattern.
6	–	Product check mode	Executes No. 4, No. 2 and No. 5 continuously.
7	03	Signal send mode	Sends modem signals sequentially.
8	–	Memory clear mode	Clears the backup memory contents to reset it to the initial state.
9	–	CCD adjust mode	Used for CCD adjustment. Executes copy operation. When the STOP key is pressed, the unit goes into the wait state. When the START key is pressed again, the unit starts operation again.
10	04	Copy test mode	Checks the copy operation.
11	--	All black mode	Performs all-dot printing (2m). (Check thermal head operation)
12	05	Auto feeder mode	Feeds the original documents.
13	–	Message print	The display message of each language is printed out together with the English equivalent.
14	–	Ring & dial free mode	Allows CI detection of 13Hz or more. Eliminates dial tone detection in auto dial.
15	–	A.M. check	Tests answering mode recording and playback.
16	–	Flash memory check	Checks flash memory write/read.
17	–	Flash memory clear	Checks flash memory clearing.

3. Diagnostic items description

3. 1. Soft switch setting mode

Used to change the soft switch settings.

The soft switch which is stored internally is set by using the keys.

The available soft switches are SW-A1 to SW-K1.

The content of soft switches is shown in page 2-5 to 2-13.

The contents are set to factory default settings.

3. 2. Rapid key 01: ROM & RAM check mode

ROM executes the sum check, and RAM executes the matching test. The result will be notified with the number of short sounds of the buzzer as well as by printing the ROM & RAM check list.

Number of short sounds of buzzer 0 → No error
1 → ROM error
2 → RAM error (8Kbyte)

3. 3. Aging mode

If any document is first present, copying will be executed sheet by sheet. If no document is present, the check pattern will be printed sheet by sheet. This operation will be executed at a rate of one sheet per 5minutes, and will be ended at a total of 10 sheets.

3. 4. Panel check mode

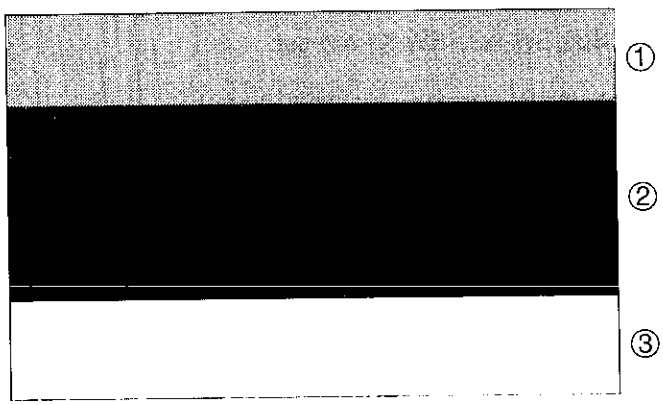
In this mode, whether each key operates properly or not is checked. Press a key on the operation panel, and the corresponding key will be displayed. In this mode, press the STOP key, and the list of the keys pressed in this mode will be printed with the mode ended.

Whether all keys are pressed in this mode or not will be judged when the list is printed, and the result will be printed.

3. 5. Rapid key 02: Check pattern mode

This mode is used to check the status of print head. Two sheets of check pattern are printed. The following information of check pattern is printed.

① Vertical stripes (alternate white and black lines) Approx. 35 mm
② Full black Approx. 70 mm
③ Full white Approx. 35 mm



3. 6. Product check mode

This mode is used to perform No. 4 (panel check), No. 2 (ROM & RAM check) and No. 5 (check pattern) continuously.

3. 7. Rapid key 03: Signal send mode

This mode is used to send various signals to the line.

FAX signals are sent in the level set by the soft switch.

[1] No signal (CML signal turned on)
[2] 9600bps
[3] 7200bps
[4] 4800bps
[5] 2400bps
[6] 300bps (FLAG)
[7] 2100Hz (CED)
[8] 1100Hz (CNG)
[9] END

The signal can be checked by plugging the handset into the TEL line connector on the rear of the machine.

3. 8. Memory clear mode

This mode is used to clear the backup memory and reset to the default settings.

3. 9. CCD adjust mode

This mode is used to adjust the optical system. Since the copy is function performed, set the original. To abort the copy operation, press the STOP key. To restart press the START key. When the copy is completed or when the STOP key is pressed in the interruption state, exit from this mode occurs.

3. 10. Rapid key 04: Copy test mode

This mode is used to check the copy operation and picture quality.

Before using this mode, set the original. If there is no original, the recording paper is cut.

The first page is copied in condition of FINE/AUTO the second and the subsequent pages are copied in condition of H-TONE/DARK.

3. 11. All back copy

This mode is used to check the print head.

All-dot print is executed unconditionally until 2(m) is obtained except when any trouble occurs (recording paper has run out, recording paper jam, thermal protect).

3. 12. Rapid key 05: Auto feeder mode

In this mode, a document is inserted and discharged to check the auto feed function.

After this mode is started, set a document, and the document feed will be automatically tested.

3. 13. Message print mode

Used to print the displayed message of communication for translate each language.

3. 14. Ring & Dial free

Used to reject dial tone check while autodialing is carried out. And used to change the bottom Ring frequency of auto-receiving to 13Hz.

3. 15. A.M. check

This mode is used to test answering mode recording and playback.

When the unit enters this mode, "A.M. CHECK" is displayed. Press the START key. Then, PRESS START OR 4 displayed. You can specify the following 2 tests by selecting START or 4 key. The test is semi-automatically performed. When the STOP key is pressed, A.M. CHECK is aborted.

1. START key
4. OGM playback

One of the following hardware operations is performed according to the selected test.

1. O.G.M. RECORD -- RFSEL : LOW
4. O.G.M. PLAYBACK -- SPMUTE : HI

3. 16. Flash memory check

Data is written into and read from the flash memory to check the data conformity. When the unit enters this mode, the check is started.

3. 17. Flash memory clear

Data in the flash memory is cleared (memory clear). When the unit enters this mode, the check is started.

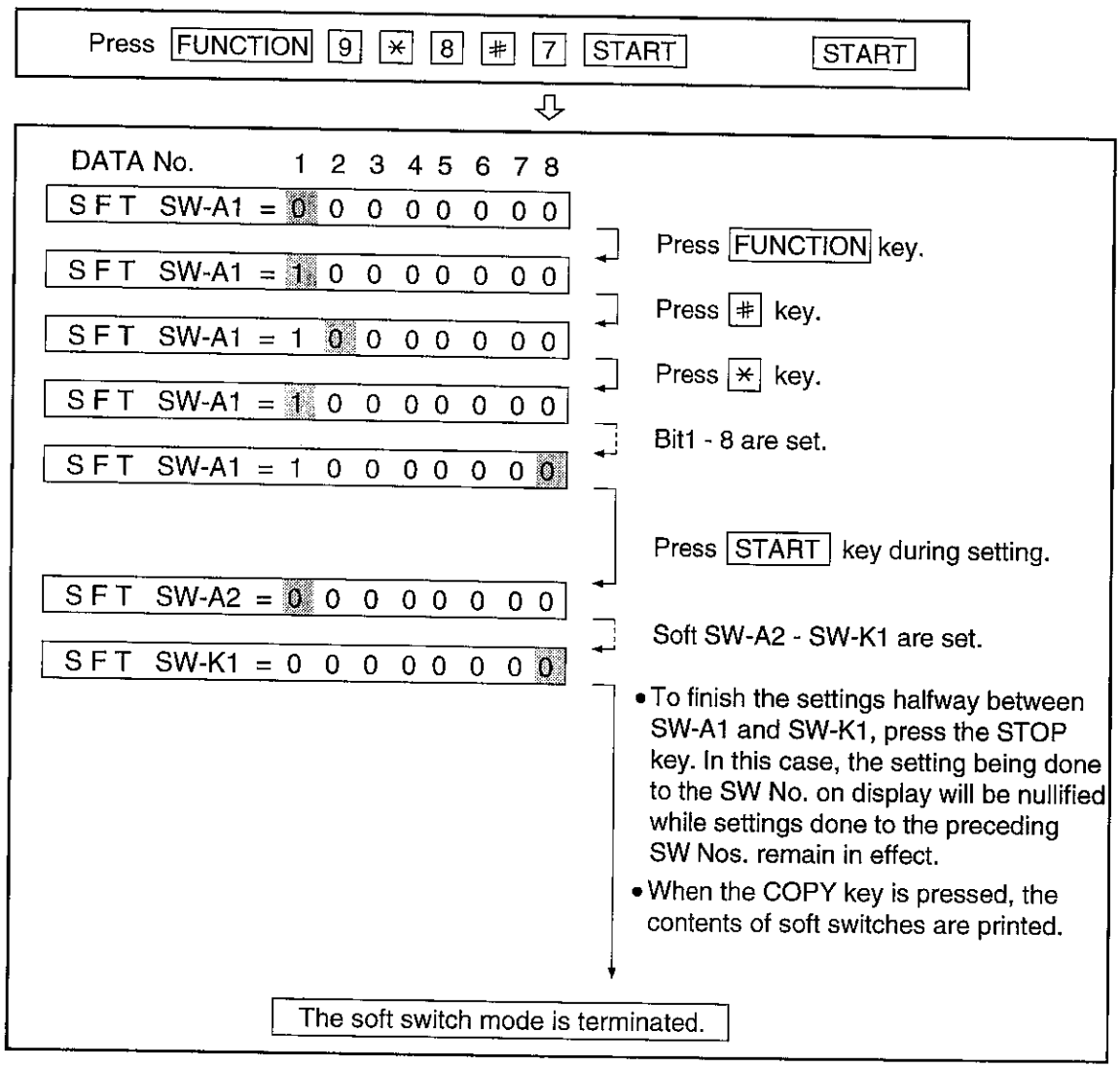
* Operation of hardware and signal in the flash memory check mode and flash memory clear mode, and the result of check

The result is announced by the buzzer beeps. The result of check is printed.

Beeps
- 0 → No error
- 1 → Memory error

4. How to make soft switch setting

To enter the soft switch mode, make the following key entries in sequence.


Press FUNCTION 9 * 8 # 7 START
START
DATA No. 1 2 3 4 5 6 7 8
SFT SW-A1 = 0 0 0 0 0 0 0 0
SFT SW-A1 = 1 0 0 0 0 0 0 0
SFT SW-A1 = 1 0 0 0 0 0 0 0
SFT SW-A1 = 1 0 0 0 0 0 0 0
SFT SW-A1 = 1 0 0 0 0 0 0 0
SFT SW-A2 = 0 0 0 0 0 0 0 0
SFT SW-K1 = 0 0 0 0 0 0 0 0
Press FUNCTION key.
Press # key.
Press * key.
Bit1 - 8 are set.
Press START key during setting.
Soft SW-A2 - SW-K1 are set.
• To finish the settings halfway between SW-A1 and SW-K1, press the STOP key. In this case, the setting being done to the SW No. on display will be nullified while settings done to the preceding SW Nos. remain in effect.
• When the COPY key is pressed, the contents of soft switches are printed.
The soft switch mode is terminated.

5.Soft switch description

- **Soft switch**

SW NO.	DATA NO.	ITEM	Switch Setting and Function		Initial setting							Remarks
			1	0	SE	AT	CH	NL	IT	BE	ES	
SW I A1	1	Digital line equalization setting	Yes	No	1	1	1	1	1	1	1	
	2	Forced 4800bps reception	Yes	No	0	0	0	0	0	0	0	
	3	CED time signal interval	500ms	75ms	0	0	0	0	0	0	0	
	4	Modem speed		9600BPS / 7200BPS / 4800BPS / 2400BPS								
	5		No. 4	1 / 1 / 0 / 0	1	1	1	1	1	1	1	
			No. 5	0 / 1 / 1 / 0	0	0	0	0	0	0	0	
	6	Length limitation of copy/send/receive	No limit	Copy/Send: 1m Receive: 1.5m	0	0	0	0	0	0	0	
	7	CSI transmission	No transmitted	Transmitted	0	0	0	0	0	0	0	
	8	DIS receive acknowledgement during G3 transmission	Twice	NSF: Once DIS: Twice	0	0	0	0	0	0	0	
SW I A2	1	Non modulated carrier for V29 transmission mode	Yes	No	1	1	1	1	1	1	1	
	2	EOL detect timer	25sec	5sec	0	0	0	0	0	0	0	
	3	Protocol monitor	Yes	No	0	0	0	0	0	0	0	
	4	Line monitor	Yes	No	0	0	0	0	0	0	0	
	5	Signal transmission level	Binary input 8 4 2 1		1	1	1	1	1	1	1	
	6		No. = 1 2 3 4		1	0	0	1	0	0	0	
	7		1 0 1 0 (-10dBm)		0	1	0	0	1	0	1	
	8				0	0	0	1	1	0	1	
SW I A3	1	Sender's information transmit	No	Yes	0	0	0	0	0	0	0	
	2	Reserved			0	0	0	0	0	0	0	
	3	Communication error treatment in RTN sending mode (reception)	No communication error	Communication error	0	0	0	0	0	0	0	
	4	CNG transmission	No	Yes	0	0	0	0	0	0	0	
	5	Auto gain control (MODEM)	Enable	Disable	1	1	1	1	1	1	1	
	6	Equalizer freeze control (MODEM)	On	Off	0	0	0	0	0	0	0	
	7	Equalizer freeze control 7200 bps only	No	Yes	0	0	0	0	0	0	0	
	8	Error criterion	10 ~ 20%	5 ~ 10%	0	0	0	0	0	0	0	
SW I A4	1	Disconnect the line when DIS is received in RX mode.	No	Yes	1	1	1	1	1	1	0	
	2	Footer Print	Yes	No	0	0	0	0	0	0	0	
	3	End Buzzer	Yes	No	1	1	1	1	1	1	1	
	4	Reserved			0	0	0	0	0	0	0	
	5	Reserved			0	0	0	0	0	0	0	
	6	Reserved			0	0	0	0	0	0	0	
	7	Reserved			0	0	0	0	0	0	0	
	8	Reserved			0	0	0	0	0	0	0	
SW I B1	1	Reserved			0	0	0	0	0	0	0	
	2	Reserved			0	0	0	0	0	0	0	
	3	Reserved			0	0	0	0	0	0	0	
	4	Reserved			0	0	0	0	0	0	0	
	5	Recall times	Binary input 8 4 2 1		0	0	0	0	0	0	0	
	6		No. = 1 2 3 4		0	0	0	0	0	0	0	
	7		0 0 1 0 (Twice)		1	1	1	1	1	1	1	
	8				0	0	0	0	0	0	0	
SW I B2	1	Dial pausing(sec/pause)	4sec	2sec	1	1	1	1	1	1	1	
	2	Dial tone detection(before auto dial)	No	Yes	0	0	0	0	1	0	0	
	3	Line current detection (before auto dial)	No	Yes	0	0	1	1	1	0	0	DE/AT not work (Always "No")
	4	Busy tone detection(after auto dial)	No	Yes	0	0	0	0	0	0	1	
	5	Waiting time after dialing	90sec	as is PTT	0	0	0	0	0	0	0	
	6	D.P. dialing (Only for SE/DK/NO/NL)	Disable	Enable	1	0	0	1	0	0	0	
	7	Busy tone detect after ring back tone (Only for CH)	No	Yes	0	0	0	0	0	0	0	
	8	PBX connection	Yes	No	0	0	0	0	0	0	0	OPTION

SW NO.	DATA NO.	ITEM	Switch Setting and Function					Initial setting							Remarks
			1		0			SE	AT	CH	NL	IT	BE	ES	
SW I B3	1	PBX recall function(R key select)		No Ope.	No Ope.	Earth	Flash								
	2		No. 1	0	0	1	1	1	1	1	1	1	1	1	
			No. 2	0	1	0	1	1	1	1	1	1	1	1	OPTION
	3	2nd Dial Tone Detect (Only for France)	Yes			No		0	0	0	0	0	0	0	
	4	PBX select		ID	ID	Earth	Flash								
	5		No. 4	0	0	1	1	0	0	0	0	0	0	0	
			No. 5	0	1	0	1	0	0	0	0	0	0	0	OPTION
	6	Reserved						0	0	0	0	0	0	0	
	7	Reserved						0	0	0	0	0	0	0	
	8	Reserved						0	0	0	0	0	0	0	
SW I B4	1	Reserved						0	0	0	0	0	0	0	
	2	Reserved						0	0	0	0	0	0	0	
	3	Dial mode	Tone			Pulse		1	0	0	1	0	0	0	
	4	Pulse→Tone change function by × key	Enable			Disable		1	1	1	1	1	1	1	
	5	Reserved						0	0	0	0	0	0	0	
	6	Reserved						0	0	0	0	0	0	0	
	7	Reserved						0	0	0	0	0	0	0	
	8	Reserved						0	0	0	0	0	0	0	
SW I C1	1	Reading slice (Binary)		Factory Setting	Light	Dark	Darker in Dark mode								
	2		No. 1	0	1	0	1	0	0	0	0	0	0	0	
			No. 2	0	0	1	1	0	0	0	0	0	0	0	
	3	Reading slice (Half tone)		Factory Setting	Light	Dark	Darker in Dark mode								
	4		No. 3	0	1	0	1	0	0	0	0	0	0	0	
			No. 4	0	0	1	1	0	0	0	0	0	0	0	
	5	Line density selection	Fine			Standard		0	0	0	0	0	0	0	OPTION
	6	Reserved						0	0	0	0	0	0	0	
	7	Reserved						0	0	0	0	0	0	0	
	8	Reserved						0	0	0	0	0	0	0	
SW I D1	1	Number of rings for auto receive	Binary input		8 4 2 1			0	0	0	0	0	0	0	
	2		No. =		1 2 3 4			0	0	0	0	0	0	0	
	3				0 0 0 1 (Once)			0	0	1	0	1	1	1	
	4							1	1	0	1	0	0	0	OPTION
	5	Automatic switching manual to auto receive mode	Reception after 5 rings			No reception		0	0	0	0	0	0	0	
	6	Reserved						0	0	0	0	0	0	0	
	7	CI detection	13Hz or more			as is PTT		0	0	0	0	0	0	0	
	8	Reserved						0	0	0	0	0	0	0	
SW I D2	1	Reserved						0	0	0	0	0	0	0	
	2	Reserved						0	0	0	0	0	0	0	
	3	Reserved						0	0	0	0	0	0	0	
	4	Reserved						0	0	0	0	0	0	0	
	5	Reserved						0	0	0	0	0	0	0	
	6	Reserved						0	0	0	0	0	0	0	
	7	Reserved						0	0	0	0	0	0	0	
	8	Reserved						0	0	0	0	0	0	0	
SW I E1	1	Automatic switching mode	Tel/Fax auto switch			Switch to fax		1	1	1	1	1	1	1	
	2	Pseudo ringing time at the phone/fax automatic switching mode		15s	30s	60s	120s								
	3		No. 2	0	1	0	1	0	0	0	0	0	0	0	
			No. 3	0	0	1	1	0	0	0	0	0	0	0	OPTION
	4	Number of CNG signal detection at the phone/fax automatic switching mode	Twice			Once		1	1	1	1	1	1	1	
	5	Reserved						0	0	0	0	0	0	0	
	6	Reserved						0	0	0	0	0	0	0	
	7	Post answer tone transmit at the phone/fax mode	No transmitted			Transmitted		0	0	0	0	0	0	0	
	8	Reserved						0	0	0	0	0	0	0	

SW NO.	DATA NO.	ITEM	Switch Setting and Function						Initial setting							Remarks
			1			0			SE	AT	CH	NL	IT	BE	ES	
SW I E2	1	Pseudo ringer sound output level to the line		-10dBm	-15dBm	-20dBm	-25dBm									This switch is only to the line. Level from speaker is set by Opt. setting (RINGER VOLUME).
	2		No. 1	0	1	0	1		0	0	0	0	0	0	0	
			No. 2	0	0	1	1		0	0	0	0	0	0	0	
	3	ICM playing back output level during remote operation (0 ~ -31dBm)	Binary input No. =			16 8 4 2 1			1	1	1	1	1	1	1	
	4					3 4 5 6 7			0	0	0	0	0	0	0	
	5					1 0 0 0 1 (-17dBm)			0	0	0	0	0	0	0	
	6								0	0	0	0	0	0	0	
	7								1	1	1	1	1	1	1	
	8	Reserved							0	0	0	0	0	0	0	
SW I F1	1	DTMF detection time		50ms	80ms	100ms	120ms									
	2		No. 1	0	0	1	1		0	0	0	0	0	0	0	
			No. 2	0	1	0	1		0	0	0	0	0	0	0	
	3	Protection of remote reception (5XX) detect	Yes			No			0	0	0	0	0	0	0	
	4	Remote reception with GE telephone	Compatible			Not compatible			1	1	1	1	1	1	1	
	5	Remote operation code figures by external tel (0 ~ 9)	Binary input No. =			8 4 2 1			0	0	0	0	0	0	0	
	6					1 2 3 4			1	1	1	1	1	1	1	
	7					0 1 0 1 (5XX)			0	0	0	0	0	0	0	
	8								1	1	1	1	1	1	1	OPTION
SW I F2	1	CNG detection in STAND-BY mode	Yes			No			1	1	1	1	1	1	1	OPTION
	2	Number of CNG detect (AM mode)		1pulse	2pulses	3pulses	4pulses									
	3		No. 2	0	0	1	1		0	0	0	0	0	0	0	
			No. 3	0	1	0	1		1	1	1	1	1	1	1	
	4	Number of CNG detect (STAND-BY mode)	No. 4	0	0	1	1		0	0	0	0	0	0	0	
	5		No. 5	0	1	0	1		1	1	1	1	1	1	1	
	6	Reserved							0	0	0	0	0	0	0	
	7	Reserved							0	0	0	0	0	0	0	
	8	Reserved							0	0	0	0	0	0	0	
SW I G1	1	Reserved							0	0	0	0	0	0	0	
	2	Reserved							0	0	0	0	0	0	0	
	3	Reserved							0	0	0	0	0	0	0	
	4	Reserved							0	0	0	0	0	0	0	
	5	Reserved							0	0	0	0	0	0	0	
	6	Reserved							0	0	0	0	0	0	0	
	7	Reserved							0	0	0	0	0	0	0	
	8	Reserved							0	0	0	0	0	0	0	
SW I G2	1	Reserved							0	0	0	0	0	0	0	
	2	Reserved							0	0	0	0	0	0	0	
	3	Reserved							0	0	0	0	0	0	0	
	4	Reserved							0	0	0	0	0	0	0	
	5	Reserved							0	0	0	0	0	0	0	
	6	Reserved							0	0	0	0	0	0	0	
	7	Reserved							0	0	0	0	0	0	0	
	8	Reserved							0	0	0	0	0	0	0	
SW I G3	1	Reserved							0	0	0	0	0	0	0	
	2	Reserved							0	0	0	0	0	0	0	
	3	Reserved							0	0	0	0	0	0	0	
	4	Reserved							0	0	0	0	0	0	0	
	5	Reserved							0	0	0	0	0	0	0	
	6	Reserved							0	0	0	0	0	0	0	
	7	Reserved							0	0	0	0	0	0	0	
	8	Reserved							0	0	0	0	0	0	0	

SW NO.	DATA NO.	ITEM	Switch Setting and Function		Initial setting							Remarks
			1	0	SE	AT	CH	NL	IT	BE	ES	
SW I H1	1	Reserved			0	0	0	0	0	0	0	
	2	Reserved			0	0	0	0	0	0	0	
	3	Reserved			0	0	0	0	0	0	0	
	4	Busy tone continuous sound detect time	5sec	as is PTT	1	1	1	1	1	1	1	
	5	Busy tone detect continuation sound detect during OGM	No	Yes	1	1	1	1	1	1	1	
	6	Busy tone detect continuation sound detect during ICM	No	Yes	0	0	0	0	0	0	0	
	7	Busy tone detect intermittent sound detect during OGM	No	Yes	1	1	1	1	1	1	1	
	8	Busy tone detect intermittent sound detect during ICM	No	Yes	0	0	0	0	0	0	0	
SW I H2	1	Busy tone detection pulse number										
	2		2pulses: No. 1 = 0, No. 2 = 0 / 4pulses: No. 1 = 0, No. 2 = 1 / 6pulses: No. 1 = 1, No. 2 = 0 / 10pulses: No. 1 = 1, No. 2 = 1		0	0	1	0	1	0	1	
					1	1	0	1	1	1	1	
	3	Fax switching when A.M. full	Yes	No	0	0	0	0	0	0	0	OPTION
	4	Reserved			0	0	0	0	0	0	0	
	5	Reserved			0	0	0	0	0	0	0	
	6	Reserved			0	0	0	0	0	0	0	
	7	Transfer dial recall	Disable	Enable	0	0	0	0	0	0	0	
	8	Reserved			0	0	0	0	0	0	0	
SW I I1	1	ICM recording time										
	2		4min: No. 1 = 0, No. 2 = 0 / 15s: No. 1 = 0, No. 2 = 1 / 30s: No. 1 = 1, No. 2 = 0 / 60s: No. 1 = 1, No. 2 = 1		0	1	0	0	0	0	0	
					0	1	0	0	0	0	0	OPTION
	3	A.M. Quiet time1										
	4		2s: No. 3 = 0, No. 4 = 0 / 3s: No. 3 = 0, No. 4 = 1 / 4s: No. 3 = 1, No. 4 = 0 / 5s: No. 3 = 1, No. 4 = 1		0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	
	5	A.M. Quiet time2										
	6		0s: No. 5 = 0, No. 6 = 0 / 1s: No. 5 = 0, No. 6 = 1 / 2s: No. 5 = 1, No. 6 = 0 / 3s: No. 5 = 1, No. 6 = 1		1	1	1	1	1	1	1	
					0	0	0	0	0	0	0	
	7	Key input buzzer on/off switch (Two way recording mode)	On	Off	0	0	0	0	0	0	0	
	8	Reserved			0	0	0	0	0	0	0	
SW I I2	1	A.M. Quiet detect time	Binary input No. = 16 8 4 2 1 / 1 2 3 4 5 / 0 0 1 0 0 (4sec)		0	0	0	0	0	0	1	
	2				0	0	1	0	1	0	0	
	3				1	1	0	1	0	1	1	
	4				1	1	1	0	0	1	0	
	5				0	0	1	1	0	0	0	
	6	Reserved			0	0	0	0	0	0	0	
	7	Reserved			0	0	0	0	0	0	0	
	8	Alarm during 2way recording	Yes	No	0	0	0	0	0	0	0	
SW I I3	1	Max OGM record time	15s	60s	0	0	0	0	0	0	0	
	2	Reserved			0	0	0	0	0	0	0	
	3	2way record function	Disable	Enable	0	0	0	0	1	0	1	
	4	Toll saver	Disable	Enable	0	0	0	0	0	0	0	
	5	FAX reception in case of detect No sound after ICM rec.	Yes	No	0	0	0	0	0	0	0	Only for DE
	6	Reserved			0	0	0	0	0	0	0	
	7	Reserved			0	0	0	0	0	0	0	
	8	Reserved			0	0	0	0	0	0	0	
SW I I4	1	AGC maximum gain setting (line) (10 ~ 25dBm)	Binary input No. = 8 4 2 1 / 1 2 3 4 / 1 0 1 0 (20dB)		1	1	1	1	1	1	1	
	2				0	0	0	0	0	0	0	
	3				1	1	1	1	1	1	1	
	4				0	0	0	0	0	0	0	
	5	AGC maximum gain setting (Mic) (10 ~ 25dBm)	Binary input No. = 8 4 2 1 / 5 6 7 8 / 1 0 1 0 (20dB)		1	1	1	1	1	1	1	
	6				0	0	0	0	0	0	0	
	7				1	1	1	1	1	1	1	
	8				0	0	0	0	0	0	0	

SW NO.	DATA NO.	ITEM	Switch Setting and Function 1	Switch Setting and Function 0	Initial setting SE	AT	CH	NL	IT	BE	ES	Remarks
SW I I5	1	AGC Eref access code (line) (-0 ~ -30dBm with 2dBm step)	Binary input No. = 8 4 2 1	1 2 3 4 1 1 0 0 (-24dB)	1	1	1	1	1	1	1	
	2				1	1	1	1	1	1	1	
	3				0	0	0	0	0	0	0	
	4				0	0	0	0	0	0	0	
	5	AGC Eref access code (Mic) (-0 ~ -30dBm with 2dBm step)	Binary input No. = 8 4 2 1	5 6 7 8 1 1 0 0 (-24dB)	1	1	1	1	1	1	1	
	6				1	1	1	1	1	1	1	
	7				0	0	0	0	0	0	0	
	8				0	0	0	0	0	0	0	
SW I I6	1	AGC Gain adaptation threshold (line) (-40 ~ -70dBm with 2dBm step)	Binary input No. = 8 4 2 1	1 2 3 4 1 1 1 1 (-70dB)	1	1	1	1	1	1	1	
	2				1	1	1	1	1	1	1	
	3				1	1	1	1	1	1	1	
	4				1	1	1	1	1	1	1	
	5	AGC Gain adaptation threshold (Mic) (-40 ~ -70dBm with 2dBm step)	Binary input No. = 8 4 2 1	5 6 7 8 1 1 1 1 (-70dB)	1	1	1	1	1	1	1	
	6				1	1	1	1	1	1	1	
	7				1	1	1	1	1	1	1	
	8				1	1	1	1	1	1	1	
SW I I7	1	AGC slew rate (line)	Slow / Normal / Little fast / Fast									
	2		No. 1: 0 / 0 / 1 / 1	No. 2: 0 / 1 / 0 / 1	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	
	3	AGC slew rate (Mic)	Slow / Normal / Little fast / Fast									
	4		No. 3: 0 / 0 / 1 / 1	No. 4: 0 / 1 / 0 / 1	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	
	5	Reserved			0	0	0	0	0	0	0	
	6	Reserved			0	0	0	0	0	0	0	
	7	Reserved			0	0	0	0	0	0	0	
	8	Reserved			0	0	0	0	0	0	0	
SW I J1	1	Transaction report (Communication result report)	Error only / Send only / Always / No print									
	2		No. 1: 0 / 0 / 1 / 1	No. 2: 0 / 1 / 0 / 1	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	OPTION
	3	Sender's phone number setting	Cannot change	Change allowed	0	0	0	0	0	0	0	
	4	Reserved			0	0	0	0	0	0	0	
	5	Reserved			0	0	0	0	0	0	0	
	6	Summer time setting	No	Yes	0	0	0	0	0	0	0	
	7	Ringer volume	Off / Low / Middle / High									
	8		No. 7: 0 / 0 / 1 / 1	No. 8: 0 / 1 / 0 / 1	1	1	1	1	1	1	1	
					0	0	0	0	0	0	0	OPTION
SW I J2	1	Reserved			0	0	0	0	0	0	0	
	2	Reserved			0	0	0	0	0	0	0	
	3	Polling function	Yes	No	0	0	0	0	0	0	0	OPTION
	4	Reserved			0	0	0	0	0	0	0	
	5	Reserved			0	0	0	0	0	0	0	
	6	Speaker volume		No. 6 / No. 7 / No. 8								
	7		VERY LOW: 0 / 0 / 0									
	8		LOW: 0 / 0 / 1									
			MIDDLE: 0 / 1 / 0		0	0	0	0	0	0	0	
			HIGH: 0 / 1 / 1		1	1	1	1	1	1	1	
			VERY HIGH: 1 / 0 / 0		0	0	0	0	0	0	0	OPTION
SW I K1	1	Entering diag mode by pressing SPEED key	Yes	No	0	0	0	0	0	0	0	
	2	Reserved			0	0	0	0	0	0	0	
	3	Reserved			0	0	0	0	0	0	0	
	4	Reserved			0	0	0	0	0	0	0	
	5	Reserved			0	0	0	0	0	0	0	
	6	Reserved			0	0	0	0	0	0	0	
	7	Reserved			0	0	0	0	0	0	0	
	8	Reserved			0	0	0	0	0	0	0	

• Soft switch function description

SW-A1 No. 1 Digital line equalization setting

Line equalization is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A1 No. 2 Forced 4800 BPS reception

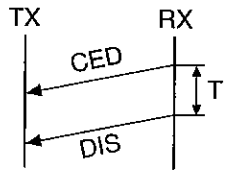
When line conditions warrant that receptions take place at 4800 BPS repeatedly. It may improve the success of receptions by setting at 4800 BPS. This improves the receiving document quality and reduces handshake time due to fallback during training.

SW-A1 No. 3 CED tone-signal interval

For international communication, the 2100Hz CED tone may act as an echo suppression switch, causing a communication problem.

Though this soft switch is normally set to 0, it should be set to 1 so as to change the timer between the CED tone and DIS signal from 75ms to 500ms to eliminate the communication problem caused by echo.

"0" set: T=75ms
"1" set: T=500ms



SW-A1 No. 4, No. 5 Modem speed

Used to set determine the initial modem speed. The default is 9600BPS.

It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for fallback procedure.

SW-A1 No. 6 Maximum copy, transmit, receive page length

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 1 meter for copy or transmit, and 1.5 meters for receive.

It is possible to set it to No limit to transmit a long document, such as a computer print form, etc. (In this case, the receiver must also be set to no limit.)

SW-A1 No. 7 CSI transmission

(CSI TRANSMISSION) is a switch to set whether the machine sends or does not send the signal (CSI signal) informing its own telephone No. to the remote fax. machine when information is received. When nonsending is set, the telephone No. is not output on the remote transmitting machine if the remote transmitting machine has the function to display or print the telephone No. of receiving machine, using this CSI signal.

SW-A1 No. 8 DIS receive acknowledgment during G3 transmission

Used to make a choice of whether reception of DIS(NSF) is acknowledged after receiving two DISs(NSFs) or receiving one DIS (two NSFs).

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A2 No. 1 Non-modulated carrier detection for V29 modem

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT.

Recomendation, it may be permitted to a send non-modulated carrier before the image signal to avoid and echo suppression problem.

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A2 No. 2 EOL (End Of Line) detect timer

Used to make a choice of whether to use the 25-second or 5-second timer for detection of EOL.

This is effective to override communication failures with some facsimile models that have longer EOL detection.

SW-A2 No. 3 Protocol monitor

Normally set to 0. If set to 1, communication can be checked, in case of troubles, without using a G3 tester or other tools.

When communication FSK data transmission or reception is made, the data is taken into the buffer. When communication is finished, the data is analyzed and printed out. When data is received with the line monitor (SW-A2 No.4) set to 1 the reception level is also printed out.

SW-A2 No. 4 Line monitor

Normally set to 0. If set to 1, the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW-A2 No. 5 ~ No. 8 Signal transmission level

Used to control the signal transmission level in the range of-1bB to -15dB.

The factory setting is at -10dB(MODEM output).

SW-A3 No. 1 Sender's information transmit

(SENDER'S INFORMATION TRANSMISSION) is a switch to set the function to print the content of HEADER PRINT described in the own telephone number list at the front end of receiver's original when original is sent to the remote machine.

If this switch is set to NO. the HEADER PRINT is not output at the receiving machine.

SW-A3 No. 2 Reserved

Set to "0".

SW-A3 No. 3 Communication error treatment (reception) in RTN sending

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to 1, communication error is judged as no error.

SW-A3 No. 4 CNG transmission

When set to 0, this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to 1, CNG transmission in the key pad dialing mode cannot be performed. In either case, CNG transmission can be performed in the auto dial mode.

SW-A3 No. 5 Auto gain control(MODEM)

When this mode is enabled, if the reception signal level is under 31dBm. The modem itself controls the signal gain automatically.

SW-A3 No. 6 Equalization freeze control

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in unfavorable state and picture cannot be received.

* Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW-A3 No. 7 Equalization freeze 7200BPS only

Setting which specifies SW14 No.3 control only in condition of 7200BPS modem speed.

SW-A3 No. 8 Error criterion

Used to select error criterion for sending back RTN when receiving image data.

SW-A4 No. 1 Disconnect the line when DIS is received in RX mode

Bit1=0: When DIS signal is received during RX mode, disconnect the line immediarely.
Bit1=1: When DIS signal is received during RX mode, wait the next signal.

SW-A4 No. 2 Footer print

When set to 1, the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW-A4 No. 3 END BUZZER

Setting this bit to 0 will disable the end buzzer (including the error buzzer /on-hook buzzer).

SW-A4 No. 4 ~ No. 8 Reserved

Set to "0".

SW-B1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-B1 No. 5 ~ 8 Recall times

Choice is made as to how many redials should be made. Use a binary number to program it. If set to 0 by accident, the redial number will be set to 1. If a number above 9 was entered, it will be set to 9.

SW-B2 No. 1 Dialing pause

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW-B2 No. 2 Dial tone detection (before auto dial)

Used to set YES/NO of dial tone detection in auto dialing.

SW-B2 No. 3 Line current detection (before auto dial)

Used to set YES/NO of line current detection in auto dialing.

SW-B2 No. 4 Busy tone detection (after auto dial)

Used to set busy tone detection in auto dialing.

SW-B2 No. 5 Waiting time after dialing

This is time waiting for the opponent's signals after dialing.

For the Switzerland version, the time is fixed to 90 seconds regardless of this switch setting.

SW-B2 No. 6 D.P. dialing (Only for SE/DK/NO)

Use to set YES/NO to disable D.P. dialing.

SW-B2 No. 7 Busy tone detect after ring back tone (Only for CH)

Used to set YES/NO to enter the recalling mode when detect busy tone after ring back tone.

SW-B2 No. 8 PBX connection

Used to select according to the connected line: PBX (Private Branch Exchange)

SW-B3 No. 1, No. 2 PBX recall function (R key select)

Used to set the operation mode of PBX recall when the R key is pressed. Setting is made according to the type of PBX

No. 1=1, No. 2=1: Time break recall(=Flash) is performed. The DPON on the LIU board is driven to initiate recall.

No. 1=1, No. 2=0: Earth recall is performed. The E-relay on the LIU board is driven to initiate recall.

SW-B3 No. 3 2nd Dial Tone Detect (Only for France)

Used to set YES/NO of dial tone detection in auto dialling.

SW-B3 No. 4, No. 5 PBX selection

Used to select the operation mode of PBX recall in auto dialing.

No. 4=1, No. 5=1: Time break recall(=Flash) is performed before dialing. The DPON on the LIU is driven to initiate recall.

No. 4=1, No. 5=0: Earth recall is performed before dialing. The E-relay on the LIU is driven to initiate recall.

No. 4=0, No. 5=0: The PBX ID digit is automatically added when dialing to external line. PBX ID is up to 3 digits and entered in Option settings mode.

SW-B3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B4 No. 1, No. 2 Reserved

Set to "0".

SW-B4 No. 3 Dial mode

When using the pulse dial, set to 1. When using the tone dial, set to 0.

SW-B4 No. 4 ✳ key Pulse dial → Tone dial

When setting to 1, the mode is changed by pressing the ✳ key from the pulse dial mode to the tone dial mode.

SW-B4 No. 5 ~ No. 8 Reserved

Set to "0".

SW-C1 No. 1, No. 2 Reading slice(binary)

Used to determine the set value of reading density in standard/fine mode. The standard setting is 00(Factory setting is 00)

SW-C1 No. 3, No. 4 Reading slice(half tone)

Used to determine the set value of reading density in half tone mode. The standard setting is 00(Factory setting is 00)

SW-C1 No. 5 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW-C1 No. 6 ~ No. 8 Reserved

Set to "0".

SW-D1 No. 1 ~ No. 4 Number of rings for auto answer mode

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to nine rings using a binary number. Since the facsimile telephone could be used as an ordinary telephone if the handset is taken off the hook, it should be programmed to the user's choice. If the soft switch was set to 1, direct connection is made to the facsimile. If a facsimile calling beep was heard when the handset is taken off the hook, press the START key and put the handset on the hook to have the facsimile start receiving. If it was set to 0 accidentally, receive ring is set to 1.

SW-D1 No. 5 Automatic switching from manual to auto receive mode

This soft switch is used to select whether the machine should switch to the auto receive mode after 5 rings in the manual received mode or remain in the same way as SW-D1 No. 1, No. 2, No. 3 and No. 4 0"1"0"1(5 rings).

SW-D1 No. 6 Reserved

Set to "0".

SW-D1 No. 7 CI detection

Detection frequency of ring signal for auto reception is set. When set to 1, frequency is set to 13Hz or more.

When set to 0, frequency is set to PTT standards.

SW-D1 No. 8 Reserved

Set to "0".

SW-D2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-E1 No. 1 Automatic switching mode

Used to set auto TEL/FAX switching mode or to set the normal fax mode.

SW-E1 No. 2, No. 3 Pseudo ringing time at the phone/fax automatic switching mode

Choice is made as to how long to rumble the dummy ringer on TEL/FAX automatic switching mode.

SW-E1 No. 4 Number of CNG signal detection at the phone/fax automatic switching mode

Used for detection of CNG in one tone or two tones in the TEL/FAX automatic switching mode.

SW-E1 No. 5, No. 6 Reserved

Set to "0".

SW-E1 No. 7 Post answer tone transmit at the phone/fax automatic mode

Used to set YES/NO of sending the tone on the auto TEL/FAX switching mode.

SW-E1 No. 8 Reserved

Set to "0".

SW-E2 No. 1, No. 2 Pseudo ringer sound volume to the line

Used to adjust sound volume of pseudo ringer to the line (ring back tone) generated on selecting TEL/FAX.

SW-E2 No. 3 ~ No. 7 ICM playing back output level during remote operation

Used to control the ICM signal transmission level during remote operation ICM playback to the line.

SW-E2 No. 8 Reserved

Set to "0".

SW-F1 No. 1, No. 2 DTMF detection time

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception(5 ✕ ✕).

The longer the detect time is, the less the error detection are caused by noises.

SW-F1 No. 3 Remote reception (5 ✕ ✕)detect

Used to set the function of remote reception (5 ✕ ✕). When set to 1, the remote reception function is disabled.

SW-F1 No. 4 Remote reception

(Corresponding to TEL made by GE) PBX

1: Compatible with TEL mode by GE

0: Not compatible

- When sending (5 ✕ ✕) for remote reception with a GE manufactured telephone remote reception may not take place because of special specification in their DTMF.
  To overcome this, a soft SW is provided to change the modem setting to allow for remote reception.
- If this soft SW is set to 1, other telephone sets may be adversely affected.

SW-F1 No. 5 ~ No. 8 Remote operation code figures by external TEL

Remote operation codes can be changes from 0 through 9. If set to greater than 9, it defaults to 9. The 5 ✕ ✕ is not changed.

Ex-7 ✕ ✕ (Default: 5 ✕ ✕)

SW-F2 No. 1 CNG signal detection in standby condition

When setting to 1, the CNG signal detection function during standby stops.

SW-F2 No. 2, No. 3 Number of CNG signal detection(AM)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 4, No. 5 Number of CNG signal detection(STAND-BY mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-G1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-G2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-G3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-H1 No. 1 ~ No. 3 Reserved

Set to "0".

SW-H1 No. 4 Busy tone continuous sound detect time

Set detecting time of busy tone for 5 seconds or as is PTT.

SW-H1 No. 5 Busy tone detect continuation sound detect during OGM

Used to select detection of the continuous sound of a certain frequency.

SW-H1 No. 6 Busy tone detect continuation sound detect during ICM

Used to select detection of the continuous sound of a certain frequency.

SW-H1 No. 7 Busy tone detect intermittent sound detect during OGM

Line off detection YES/NO during OGM sending is set.

SW-H1 No. 8 Busy tone detect intermittent sound detect during ICM

Line off detection YES/NO is set.

SW-H2 No. 1, No. 2 Number of Busy tone pulses

Used to set detection of Busy tone intermittent sounds.

SW-H2 No. 3 Fax switching when A. M. full

Used to disable or enable the function of OFF-HOOK hold.

If the answering machine's memory (tape) is full and there is no response, the machine automatically switches to Fax reception.

The OFF HOOK hold time (Ansering machine operating time) is set by normal operation.

SW-H2 No. 4 ~ No. 6 Reserved

Set to "0".

SW-H2 No. 7 Transfer dial recall

Used to disable or enable the function of recall of transfer dial.

SW-H2 No. 8 Reserved

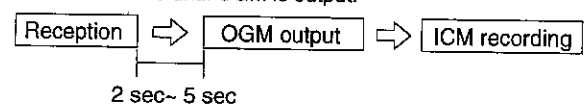
Set to "0".

SW-I1 No. 1, No. 2 ICM recording time

Used to select the incoming message recording time among 15sec/30sec/60sec/4min.

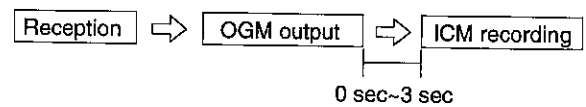
SW-I1 No. 3, No. 4 A.M. Quiet time 1

Used to select four kinds of no sound time (2sec ~ 5sec) after reception in the A.M. mode until OGM is output.



SW-I1 No. 5, No. 6 A.M. Quiet time 2

Used to select four kinds of no sound time (0sec ~ 3sec) after OGM output in the A.M. mode until ICM recording is started.



SW-I1 No. 7 Key input buzzer ON/OFF switch (TWO_WAY recording mode)

Used to turn ON/OFF key input buzzer in the TWO-WAY recording mode.

SW-I1 No. 8 Reserved

Set to "0".

SW-I2 No. 1 ~ No. 5 A.M. Quiet detect time

Used to set no sound detect time (0sec ~ 31sec) during the A.M. mode operation.

SW-I2 No. 6, No. 7 Reserved

Set to "0".

SW-I2 No. 8 Alarm during 2way recording

When set to "1", alarm sound is given to remote side during 2way-recording.

SW-I3 No. 1 Max OGM record time

Used to set the OGM recording time.
When set to "0", OGM can be recorded maximum 60sec.
When set to "1", OGM can be recorded maximum 15sec.

SW-I3 No. 2 Reserved

Set to "0".

SW-I3 No. 3 2way record function

Used to turn ON/OFF the 2way-record function.

SW-I3 No. 4 Toll saver

Used to turn ON/OFF the Toll saver function.

SW-I3 No. 5 FAX reception in case of detect No sound after ICM rec.

When set to "0", machine go into stand-by after detecting the no sound in A.M. mode.
When set to "1", machine go into fax reception after detecting the no sound in A.M. mode.

SW-I3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-I4 No. 1 ~ No. 8 AGC Maximum Gain

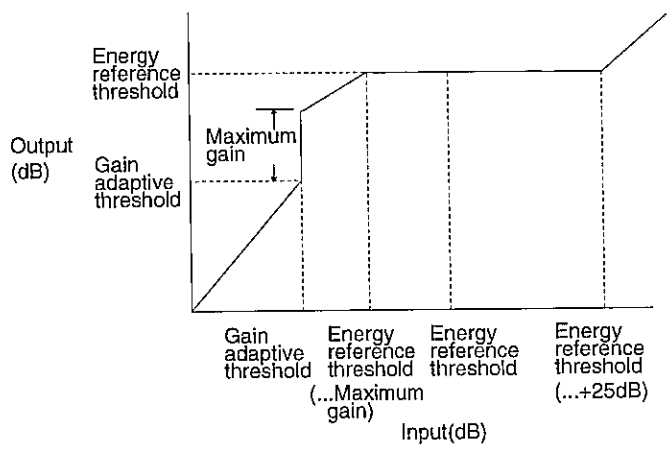
The AGC Maximum Gain (parameter 58) limits the gain applied by the AGC. Messages with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should be no greater than the amount of gain necessary to increase the average energy of the message with the lowest average energy to the AGC Energy Reference Level.

SW-I5 No. 1 ~ No. 8 AGC Energy Reference Level

The AGC Energy Reference Level (parameter 55) controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any message having average speech energy below the energy reference level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC Energy Reference Level will achieve the desired level.

SW-I6 No. 1 ~ No. 8 AGC Gain Adaptation Threshold

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold (parameter 57). The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain (parameter 58) can be no greater than the AGC Maximum Gain (parameter 59). Note that the AGC Gain Adaptation Threshold (parameter 57) must always be greater than the RPACS VOX Turn-On Threshold (parameter 51).



RPACS AGC Parameter operation envelope

SW-I7 No. 1 ~ No. 4 AGC Slew Rate

The AGC Slew Rate (parameter 56) controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

SW-I7 No. 5 ~ No. 8 Reserved

Set to "0".

SW-J1 No. 1, No. 2 Transaction report (Communication result printout)

It is possible to obtain transaction results after each communication.

Normally, the switch is set (No. 1:0, No. 2:0) so that the transaction report is produced only when a communication error is encountered.

If No. 1 was set to 1 and No. 2 to 0, the transaction report will be produced every time a communication is done, even if the communication was successful.

Setting No. 1 to 1 and No. 2 to 1 will disable this function. No transaction report printed.

No. 1:0 No. 2:1=TX ONLY Report Print

SW-J1 No. 3 Sender's phone number setting

Used to make a choice of whether the registered sender's phone number can be changed or not. If the switch is set to 1, new registration of the sender's phone number is disabled to prevent accidental wrong input.

SW-J1 No. 4, No. 5 Reserved

Set to "0".

SW-J1 No. 6 Corresponding of summer time

This is used to set YES/NO of automatic clock adjustment for European Summer time.

SW-J1 No. 7, No. 8 Ringer Volume

Used to adjust ringing volume.

SW-J2 No. 1, No. 2 Reserved

Set to "0".

SW-J2 No.3 Polling function

If this switch is set to 1, the 5th Rapid key works as polling key.

SW-J2 No. 4, No. 5 Reserved

Set to "0".

SW-J2 No. 6 ~ No. 8 Speaker Volume

Used to adjust sound volume from a speaker.

SW-K1 No. 1 Entering DIAG mode by pressing SPEED key

A bit which is used in the production process only. When the SPEED key is pressed, the switch is changed from the stand-by state to the DIAG mode.

SW-K1 No. 2 ~ No. 8 Reserved

Set to "0".

[3] Troubleshooting

Refer to the following actions to troubleshoot any of problems mentioned in 1-4.

[1] A communication error occurs.

[2] Image distortion produced.

[3] Unable to do overseas communication.

[4] Communication speed slow due to FALLBACK.

- Increase the transmission level SOFT SWITCH A2-5, 6, 7, 8.
  May be used in case [1] [2] [3].
- Decrease the transmission level SOFT SWITCH A2-5, 6, 7, 8.
  May be used in case [3].
- Apply line equalization SOFT SWITCH A1-1.
  May be used in case [1] [2] [3] [4].
- Slow down the transmission speed SOFT SWITCH A1-4, 5.
  May be used in case [2] [3].
- Replace the TEL/LIU PWB.
  May be used in all cases.
- Replace the control PWB.
  May be used in all cases.

* If transmission problems still exist on the machine, use the following format and check the related matters.

TO: ATT: Ref.No. :

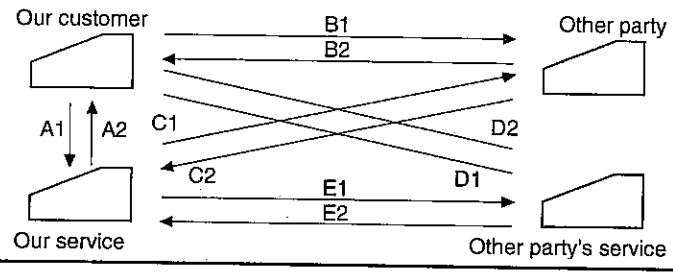
CC: ATT: Date :

FM: Dept :

Sign :

***** Facsimile communication problem *****			Ref.No.:
From: Mr.	Fax Tel No.:		Date:
Our customer	Name		Tel No.
	Address		Fax No.
	Contact person		Model name
Other party	Name		Tel No.
	Address		Fax No.
	Contact person		Model name
Problem mode	Line: Domestic / international	Model: G3	Phase: A, B, C, D.
	Reception / Transmission	Automatic reception / Manual reception	
		Automatic dialing / Manual dialing / Others	
Frequency:		%	ROM version:

Confirmation item



Please mark problem with an X.
No problem is: 0.

A1	A2	B1	B2	C1	C2	D1	D2	E1	E2

Transmission level setting is ( ) dB at our customer

Transmission level ( ) dBm
Reception level ( ) dBm
By level meter at B1 and B2

Comment

Countermeasure

**** Please attach the G3 data and activity report on problem. ****

* Please complete this report before calling the "TAC" hotline if problem still occurs.

[4] Error code table

G3 Transmission

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal Cannot recognize NSS signal
2	CFR	Disconnects line during reception
3	FTT	Disconnects line by fallback
4	MCF	Disconnects line during reception of multi-page Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	No response in receiver side to picture signal after no response in transmitter side to receive TALK mode request
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmitting RTN or RTP signal.
7	No signal or DCN	No response in receiver side or DCN signal received*

G3 Reception

Code	Final received signal	Error Condition (Transmitter side)
0	Imcomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal Disconnects line during transmission
2	NSC, DTC	Cannot recognize NSS signal
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of multi-page
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received*

CHAPTER 3. MECHANISM BLOCKS

[1] General description

1. Document feed block and diagram

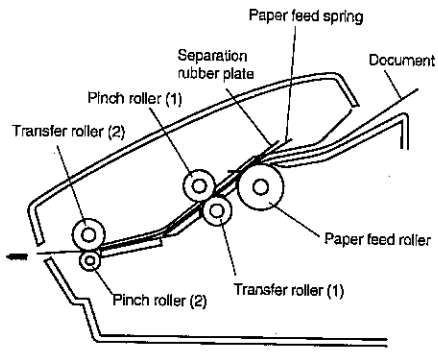


Fig. 1

2. Document feed operation

1) The document placed in the hopper actuates the document sensor. After one second, the pulse motor starts to drive the paper feed roller. The document is automatically taken up into the machine, and stopped at the document sensor.
2) When a specified number of pulses are received from the document sensor after the document lead edge is sensed, scanning is started.
3) When a specified number of pulses are received from the document sensor after the document rear edge is sensed, scanning is terminated and the document is fed through.
4) If the document sensor is active (i.e., another document is in the hopper), when the preceding document scanning is completed and it is fed out, the next document is taken up into the machine. If the document sensor is not active (i.e., there is no document in the hopper), when the document is fed out, the operation is terminated.

3. Hopper mechanism

3-1. General view

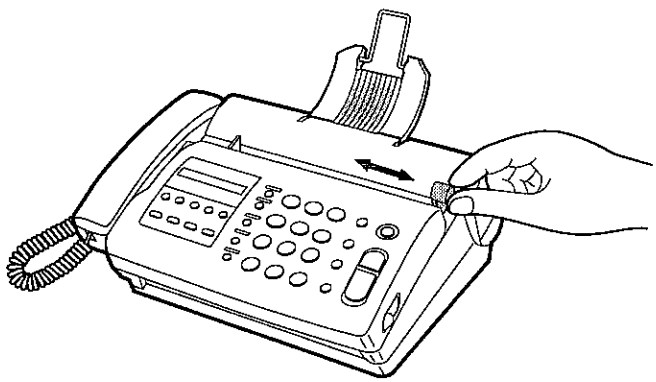


Fig. 2

The hopper is used to align documents with the document guides adjusted to the paper width.

NOTE: Adjust the document guides before and after inserting the document.

3-2. Automatic document feed

1) Use of the paper feed roller and separation rubber plate ensures error-free transport and separation of documents. The plate spring presses the document to the paper feed roller to assure smooth feeding of the document.
2) Document separation method: Separation rubber plate

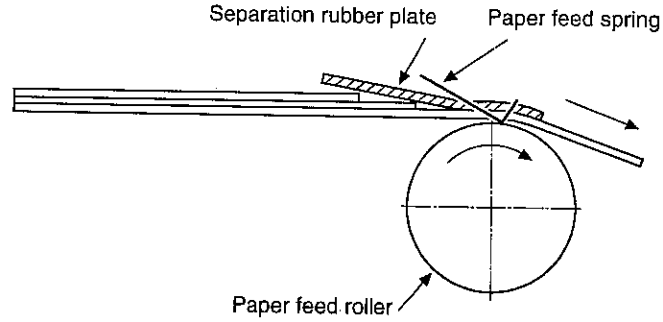


Fig. 3

3-3. Documents applicable for automatic feed

	4x6 series (788mm x 1091mm x 1000mm sheets)		Square meter series	
	Minimum	Maximum	Minimum	Maximum
Feeder capacity	15 sheets, max.			
Paper weight	45kg	64.3kg	52g/m^2	74.3g/m^2
Paper thickness (ref.)	0.06mm	0.09mm	0.06mm	0.09mm
Paper size	B6 (128mm x 182mm) ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			
Feeder capacity	10 sheets, max.			
Paper weight	45kg	90kg	52g/m^2	104g/m^2
Paper thickness (ref.)	0.06mm	0.12mm	0.06mm	0.12mm
Paper size	B6 (128mm x 182mm) ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			
Paper quality	High quality paper or equivalent			

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually. The document feed quantity may be changed according to the document thickness.

Documents corresponding to a paper weight heavier than 64.3kg (74.3g/m^2) and lighter than 135kg (157g/m^2) are acceptable for manual feed.

Documents heavier than 135kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

3-4. Loading the documents

1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
2) Place documents face down in the hopper.
   i) Adjust the document guides to the document size.
   ii) Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTES: 1) Curled edge of documents, if any, must be straighten out.
2) Do not load the documents of different sizes and/or thicknesses together.

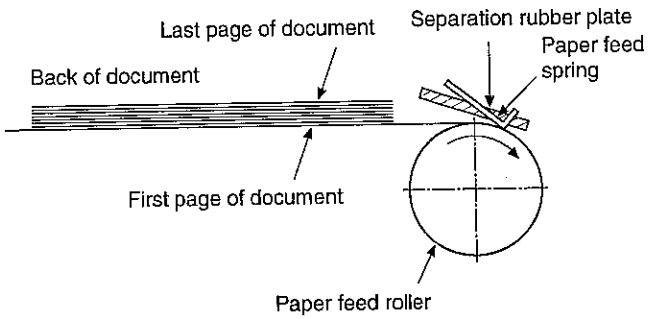


Fig. 4

3-5. Documents requiring use of document carrier

1) Documents smaller than B6 (128mm x 182mm).
2) Documents thinner than the thickness of 0.06mm.
3) Documents containing creases, folds, or curls, especially those whose surface is curled (maximum allowable curl is 5mm).
4) Documents containing tears.
5) Carbon-backed documents. (Insert a white sheet of paper between the carbon back and the document carrier to avoid transfer of carbon to the carrier.)
6) Documents containing an easily separable writing material (e.g., those written with a lead pencil).
7) Transparent documents.
8) Folded or glued documents.

Document in document carrier should be inserted manually into the feeder.

4. Document release

4-1. Cross section view

(RIGHT SIDE)

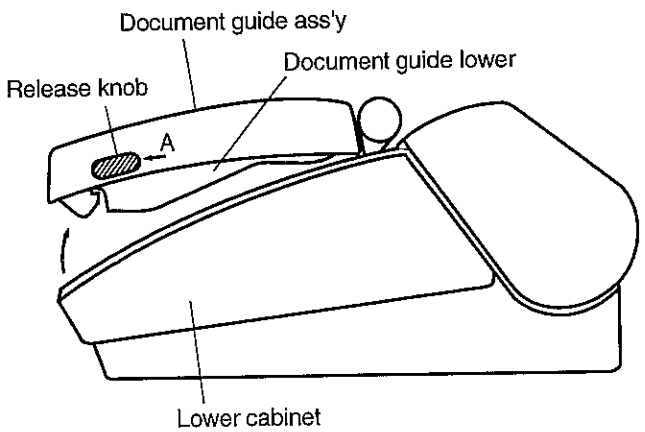


Fig. 5

4-2. General

When the release lever is pulled by hand in the direction of arrow A, the latch is released and the upper document guide moves on its axis in the direction of the arrow. The feed rollers, the separation rubber plate, and the pinch rollers become free to make it possible to remove the document.

5. Optical system

(1) General view

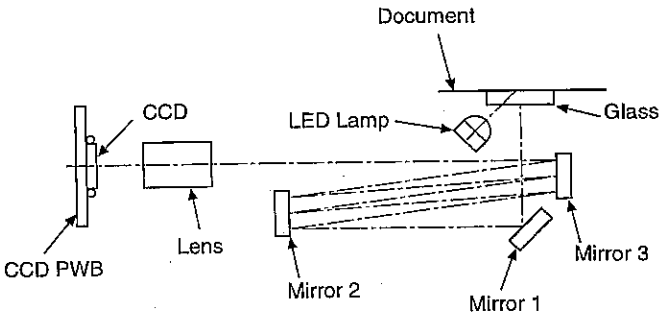


Fig. 6

(2) Composition

The optical system is composed of the document feed mechanism, the lamp, the reflecting mirrors, the focusing lens, the CCD sensor, and the read process circuit.

5-1. LED Lamp

The LED lamp is used to expose the document.

5-2. Lens

The lens is used to focus the light reflected from the document on the CCD elements.

5-3. CCD

The CCD (charge coupled device) image sensor consists of a photodiode array which converts the intensity of light reflected from the document surface into series of analog voltages which are then stored in an analog shift register. The series of analog voltages are then converted into a digital equivalent by a black/white binary logic circuit.

(Example) Scan signal output waveform

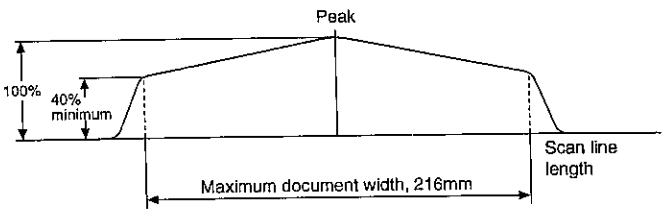


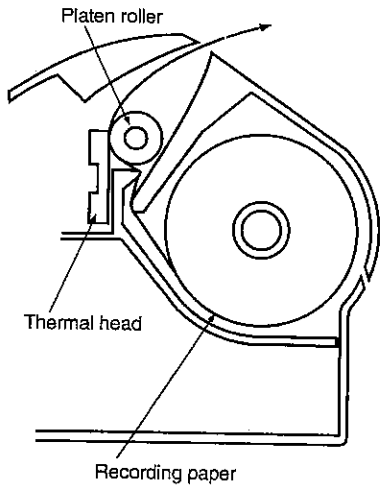
Fig. 7

1) The minimum output from the CCD at the maximum scan width of document (216mm) must be more than 40% of the peak value.
2) The peak output must be about 200mV under room temperature to avoid CCD saturation.

6. Recording block

(1) General view

Non cotter model



Cutter model

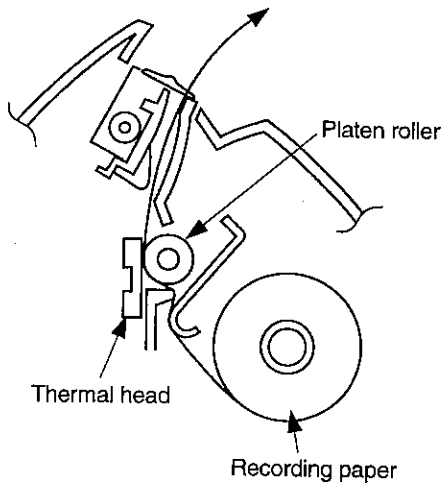


Fig. 8

6-1. Driving

Via the pulse motor gear shaft, the reduction gear, and the recording paper feed gear, rotation of the pulse motor is conveyed to the recording paper feed roller to feed the recording paper.

6-2. Recording

Use of a thermal head permits easier maintenance and low operating costs.

1) Thermal head

The thermal head consists of 1728-dot heat elements arranged in a single row and has the resolution of 8 dots/mm. The maximum recording speed is 10ms/line. The thermal head also incorporates a 1728-dot shift register latch and an output control driver circuit. Low power consumption is achieved by dividing the head into nine segments.

2) Structure of the recording mechanism

Recording is accomplished by pressing the thermal head on the recording paper against the platen roller.

The main scan (horizontal) is electronically achieved, while the sub-scan (vertical) is achieved by moving the recording paper by the recording platen roller.

Usually, the cause for uneven print tone is caused by misalignment of the thermal head or uneven contact with the roller.

It can be checked in the following manner.

1) Check if the thermal head power and signal cables are properly routed.
2) Check that the thermal head pivot moves smoothly up and down.
3) Check that the thermal head support bracket is secured without any play.
4) Check to see that the recording platen roller has proper concentricity, in the case of a print tone variation evenly repeated down the page.
5) Replace the thermal head with a new one and check to see if the same trouble occurs.

[2] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1 Recording paper cover unit, ROM cover, head cover (Non Cutter model)

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to the flowchart.

b. Disassembly the recording paper cover unit, ROM cover and head cover according to the flowchart.

Parts list (Fig. 1)

No.	Part name	Q'ty
1	Mechanism unit	1
2	Recording paper cover unit	1
3	Screw (3×8)	1
4	ROM cover	1
5	Screw (3×8)	1
6	Head cover	1
7	Platen gear	1
8	Platen bearing	2
9	Platen roller	1
10	Recording paper cover	1

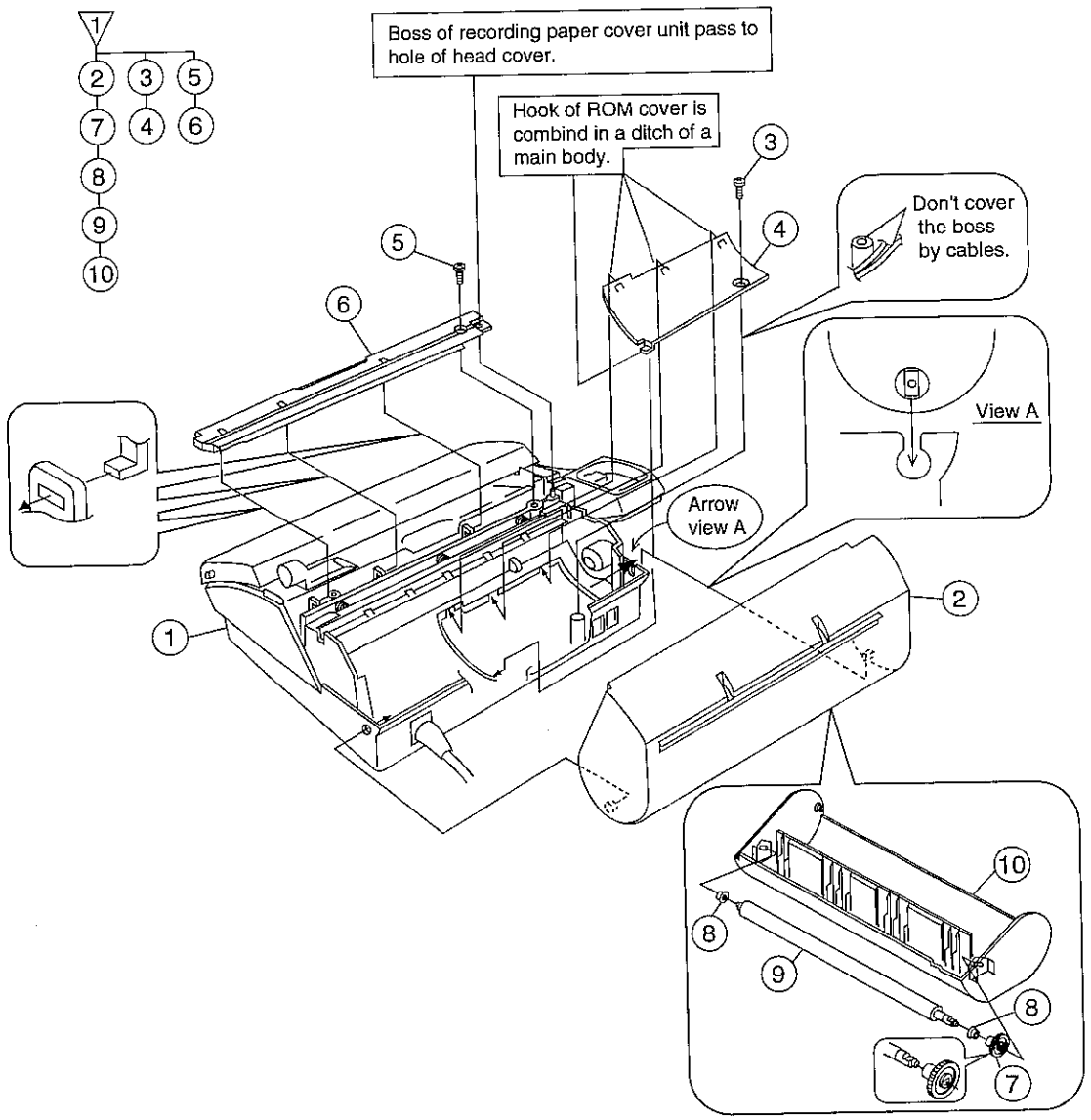


Fig. 1

2 Recording paper cover unit, ROM cover, head cover, cutter unit (Cutter model)

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to the flowchart.

b. Disassemble the recoding paper cover unit, ROM cover, head cover and cutter unit according to the flowchart.

Parts list (Fig. 2)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	13	Platen roller	1
2	Connector	1	14	Screw (3x8)	1
3	Connector	1	15	Anti plate	1
4	Recording paper cover unit	1	16	Screw (3x8)	1
			17	Sensor bracket	1
5	Screw (3x8)	1	18	Paper sensor	1
6	ROM cover	1	19	Sensor cable	1
7	Screw (3x8)	1	20	Cover sheet	1
8	Head cover	1	21	Blind sheet	1
9	Screw (3x8)	1	22	Screw (3x8)	2
10	Recoding paper side cover	1	23	Cutter unit	1
			24	Platen holder	1
11	Platen gear	1	25	Recoding paper cover	1
12	Platen bearing	2			

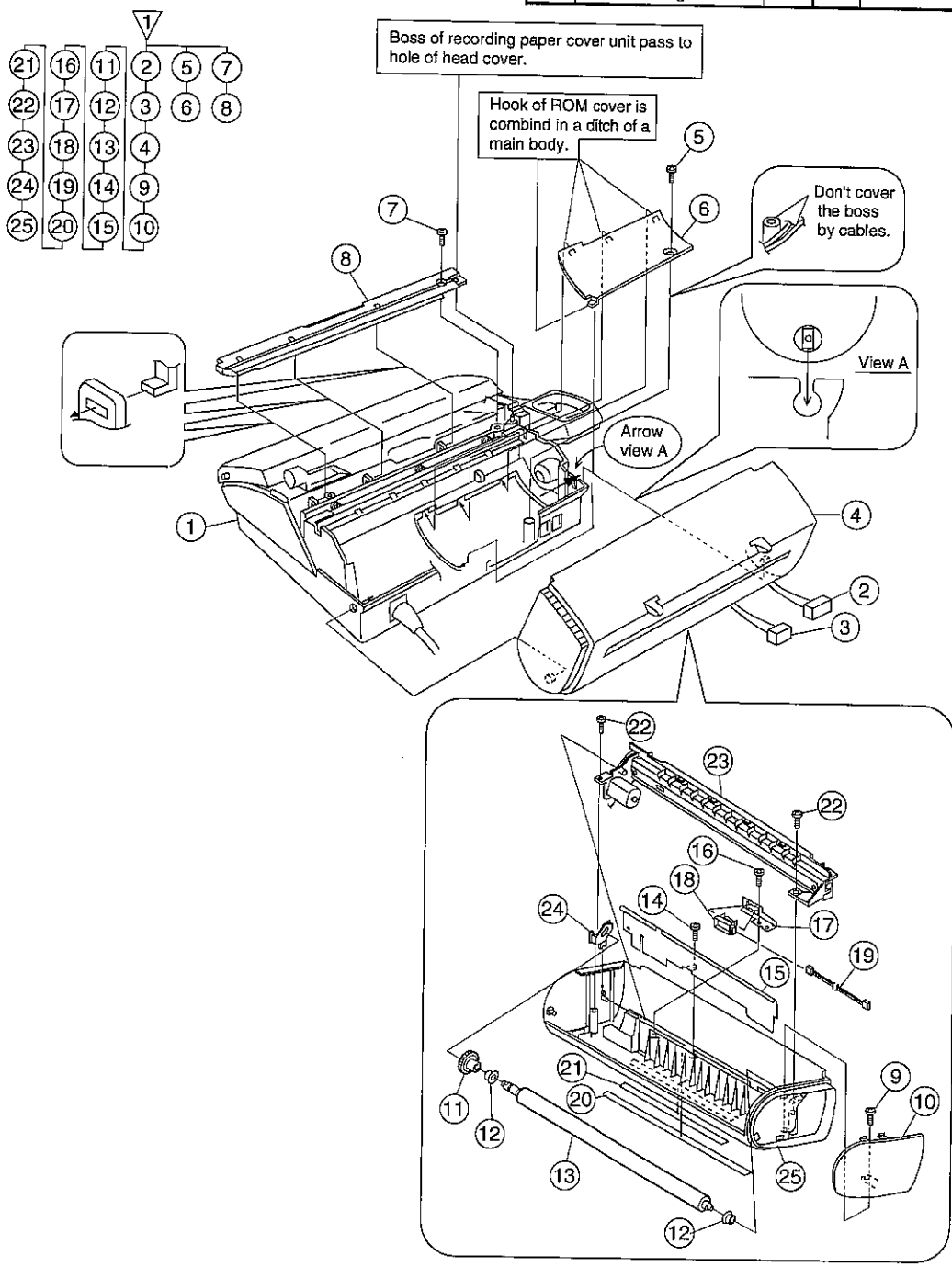

Boss of recording paper cover unit pass to hole of head cover.
Hook of ROM cover is combind in a ditch of a main body.
Don't cover the boss by cables.
View A
Arrow view A

Fig. 2

3 Head frame unit

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to the flowchart.

c. Disassemble the head frame unit according to the flowchart.

Parts list (Fig. 3)

No.	Part name	Q'ty
1	Mechanism unit	1
2	Screw (3×12)	4
3	Connector	1
4	Screw(3×6)	2
5	Head earth cable	1
6	Head frame unit	1

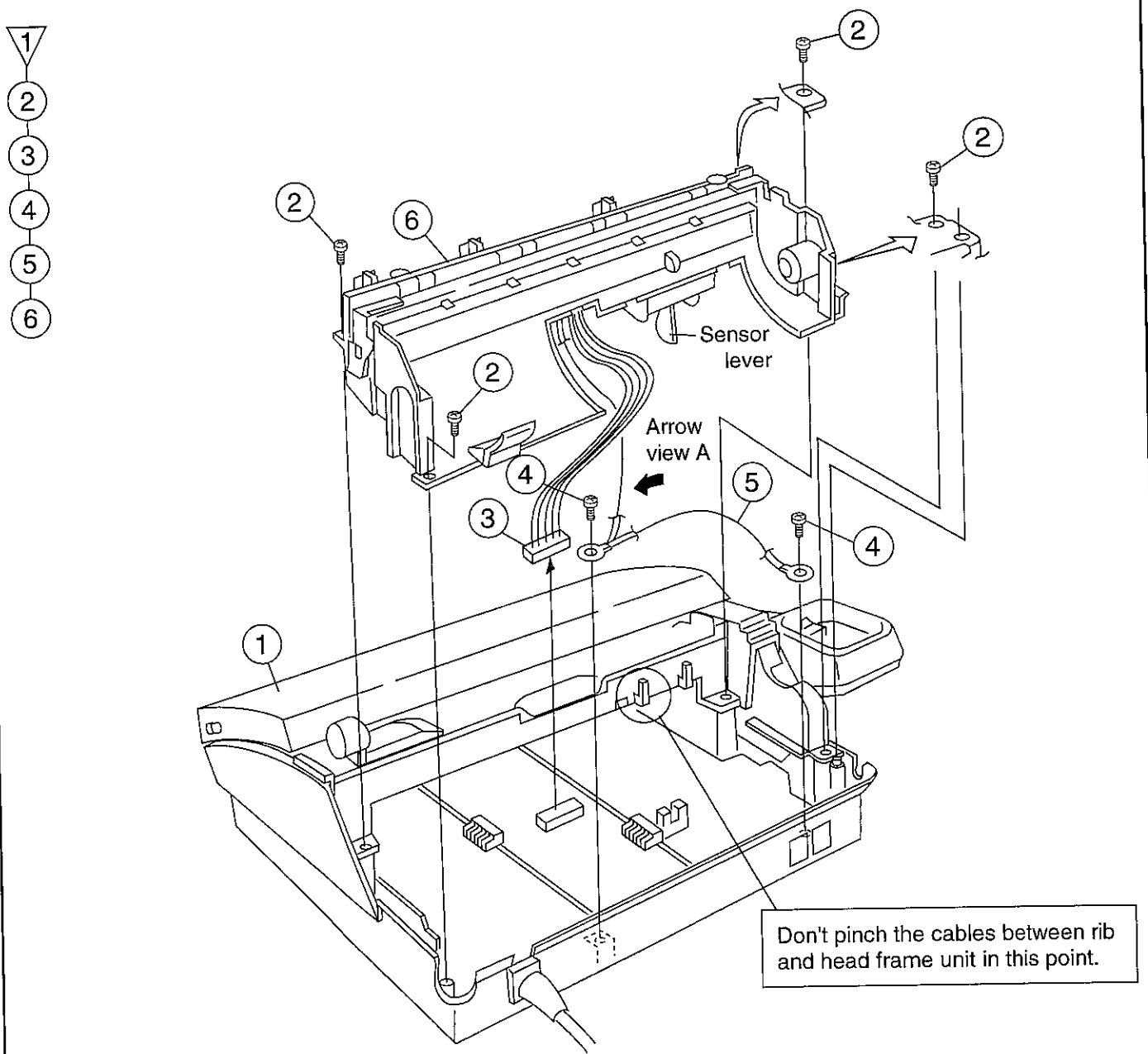


Fig. 3

[Note for assembly]

1. The head cable push direction arrow A when mounting the head frame unit. (The cable escape from sensor lever.)

4 Thermal head unit

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the thermal head to the flowchart.

Parts list (Fig. 4)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw	1	9	Paper guide	1
2	Spool	1	10	Head frame	1
3	Spool spring	1	11	Connector	1
4	Paper sensor lever spring	1	12	Screw (3x6)	1
			13	Head guide (L)	1
5	Paper sensor lever	1	14	Head earth cable	1
6	Head spring	4	15	Screw (3x6)	1
7	Thermal head unit	1	16	Head guide (R)	1
8	Head pressure spring	2	17	Thermal head	1

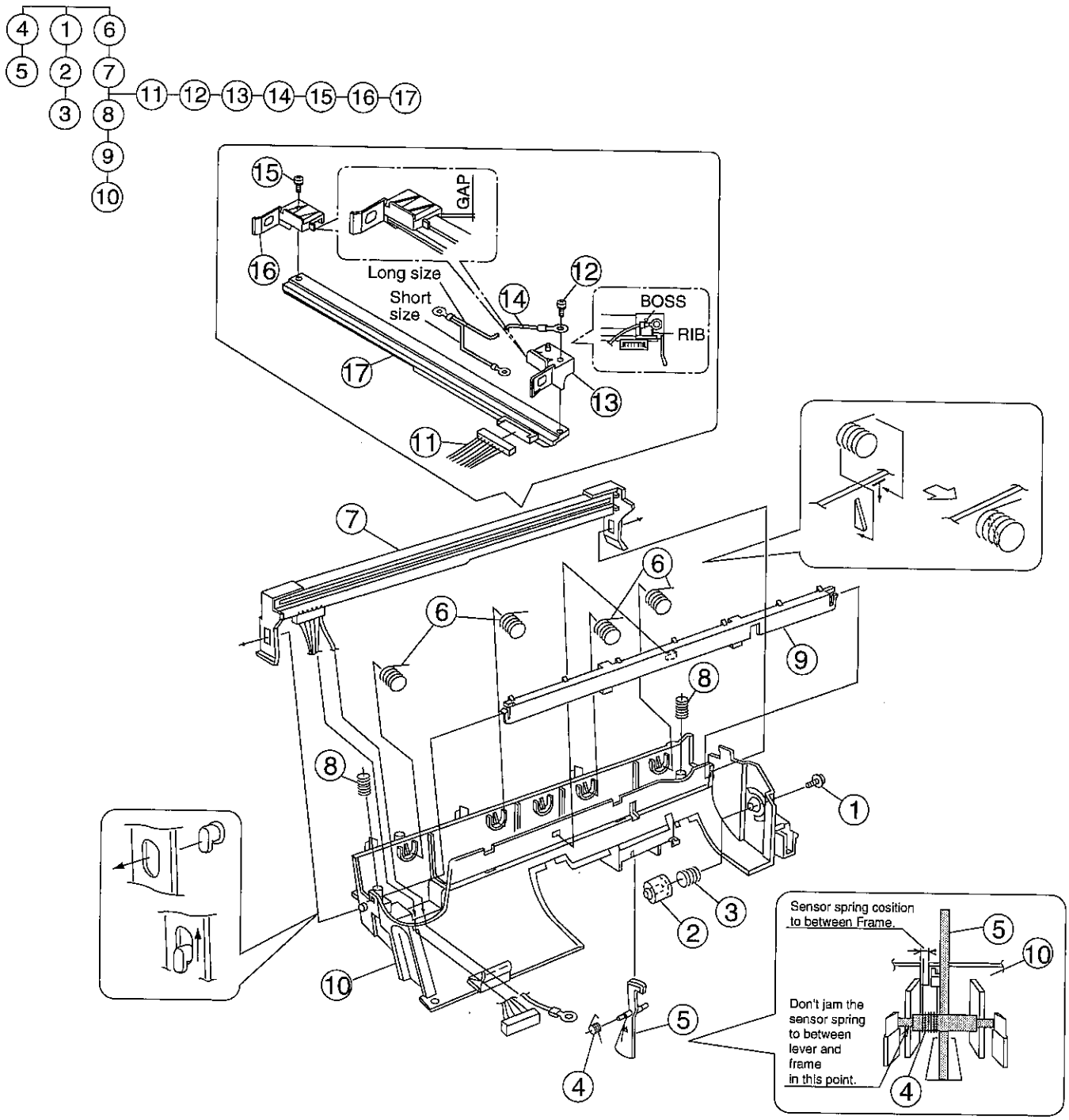


Fig. 4

5 Document guide upper ass'y, document guide lower ass'y

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y to the flowchart.

Parts list (Fig. 5)

No.	Part name	Q'ty
1	Mechanism unit	1
2	Connector	1
3	Connector (BE/IT only)	1
4	Upper cabinet ass'y	1
5	Hook switch lever	1
6	Document guide upper ass'y	1
7	Document guide lower ass'y	1

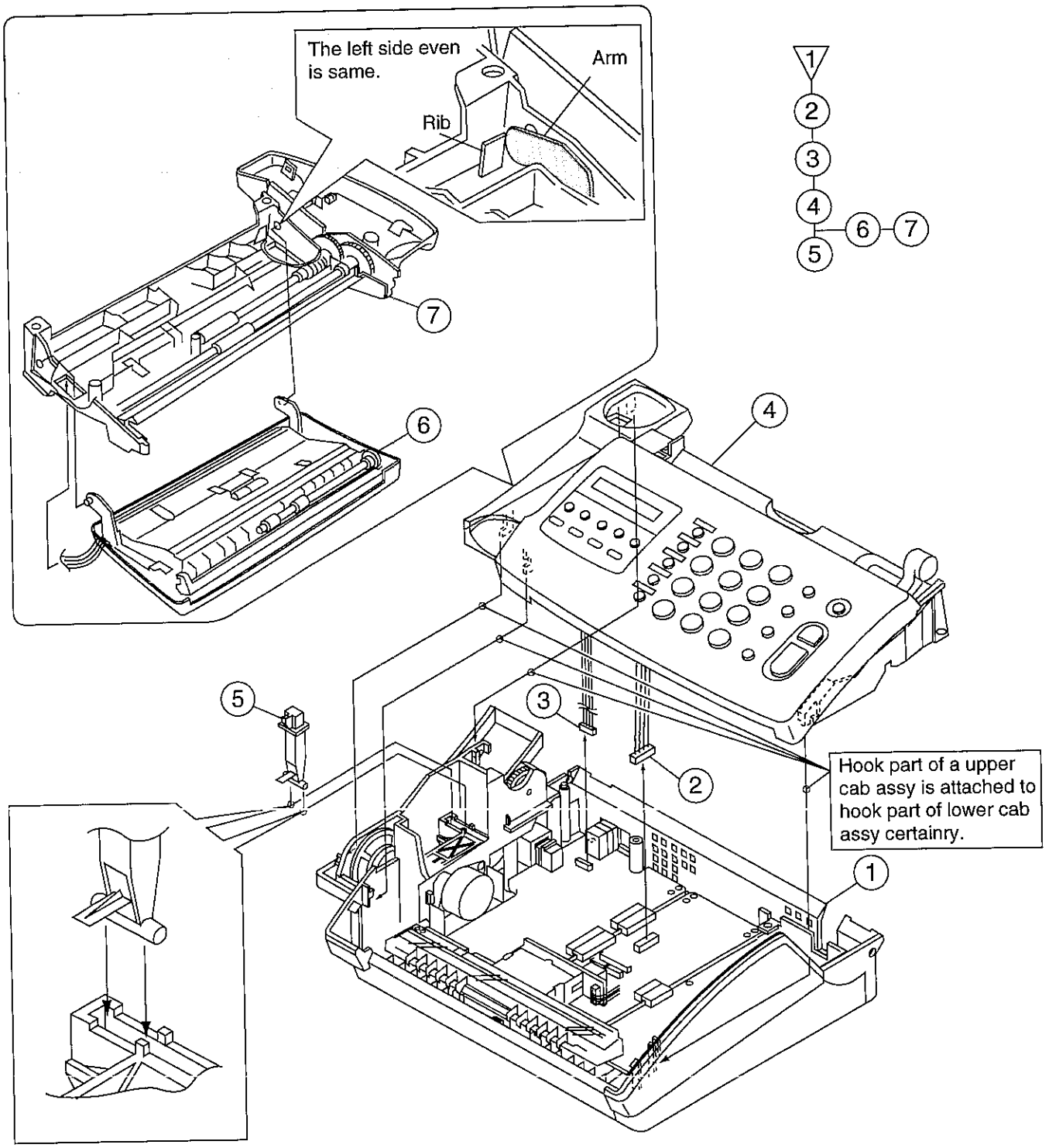


Fig. 5

6 Document guide lower ass'y

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to the procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 5-c.

d. Remove the document guide lower ass'y to the flowchart.

Parts list (Fig. 6)

No.	Part name	Q'ty
1	Screw	1
2	Hopper guide spring	1
3	Washer	1
4	Hopper guide	1
5	Transfer roller 1 gear	1
6	Roller bearing	2
7	Transfer roller 1	1
8	Paper feed roller gear ass'y	1
9	Roller bearing	2
10	Paper feed roller	1
11	Screw	1
12	Washer	1
13	Mic ass'y	1
14	Document guide lower	1

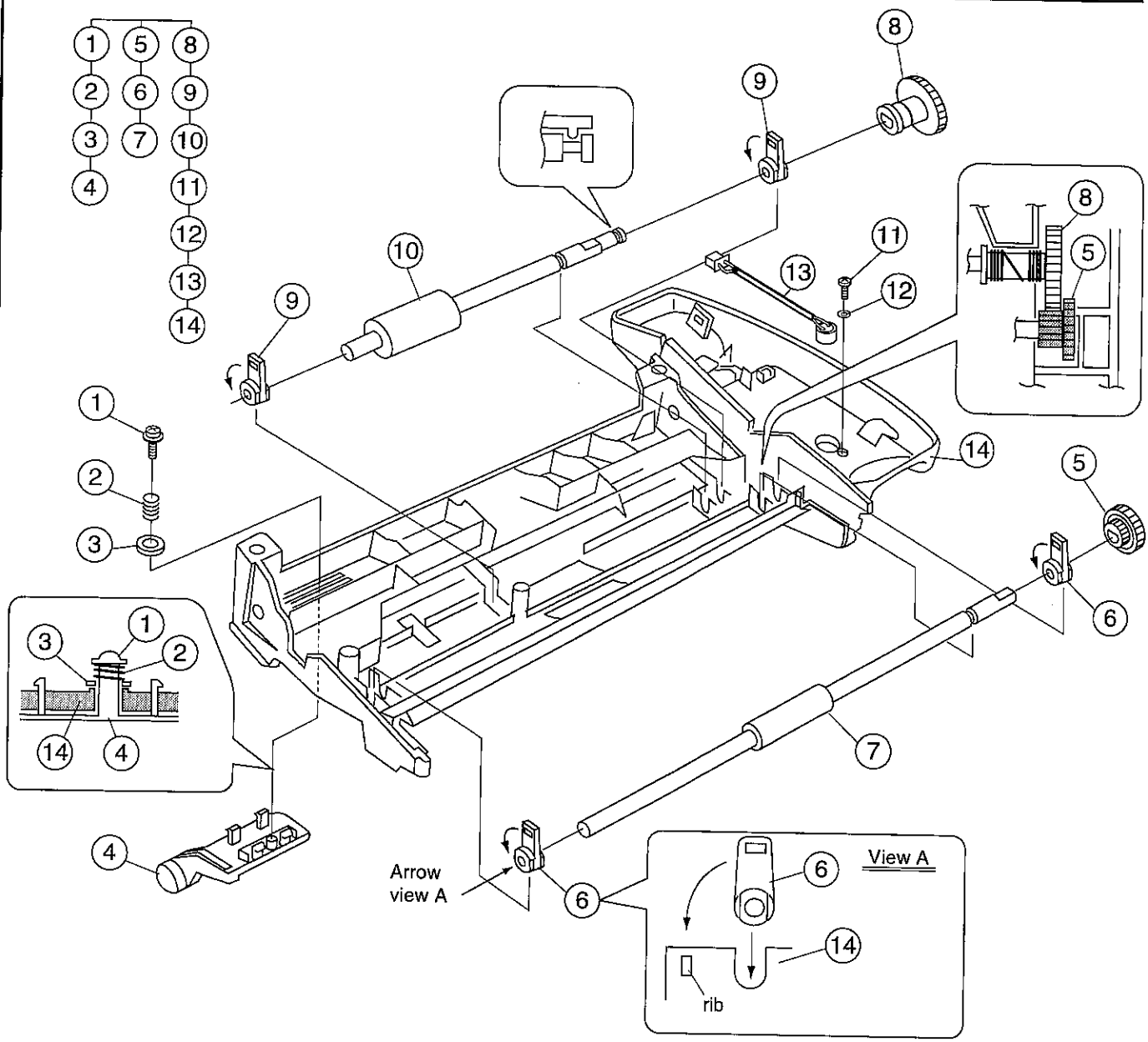


Fig. 6

7 Document guide upper ass'y

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-b.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 5-c.

d. Remove the document guide upper ass'y to the flowchart.

Parts list (Fig. 7)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Upper cabinet ass'y	1	12	Pinch roller spring	2
2	Screw (3x8)	3	13	Pinch roller shaft	1
3	Document guide upper ass'y	1	14	Pinch roller	2
4	Face sheet	1	15	Cancellation lever spring	1
5	Transfer gear	1	16	Panel lock lever	1
6	Transfer bearing	2	17	Front sensor lever	1
7	Transfer roller 2	1	18	Sensor lever return spring	1
8	Paper feed spring	1	19	Document sensor lever	1
9	Separation pressing plate	1	20	Sensor lever return spring	1
10	Paper feed spring	1	21	Document guide upper	1
11	Separation rubber plate	1			

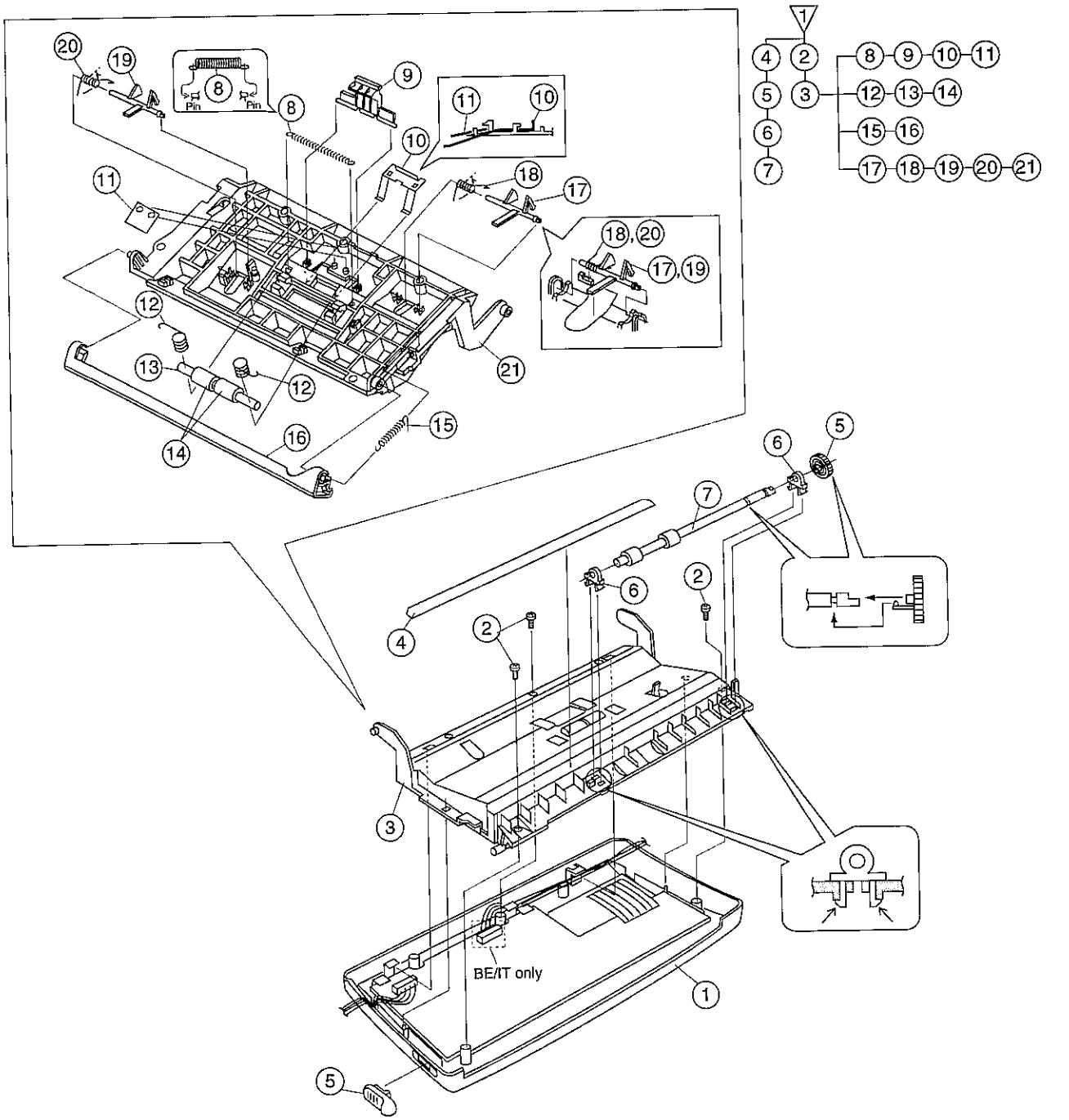


Fig. 7

8 Upper cabinet ass'y

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 5-c.

d. Remove the document guide upper ass'y from the upper cabinet ass'y according to procedure 7-d.

e. Remove the upper cabinet ass'y to the flowchart.

Parts list (Fig. 8)

No.	Part name	Q'ty
1	Screw (2x6)	8
2	Connector	1
3	Operation panel PWB	1
4	Direct key	1
5	Dial key	1
6	Ans. mode key	1
7	Upper cabinet	1

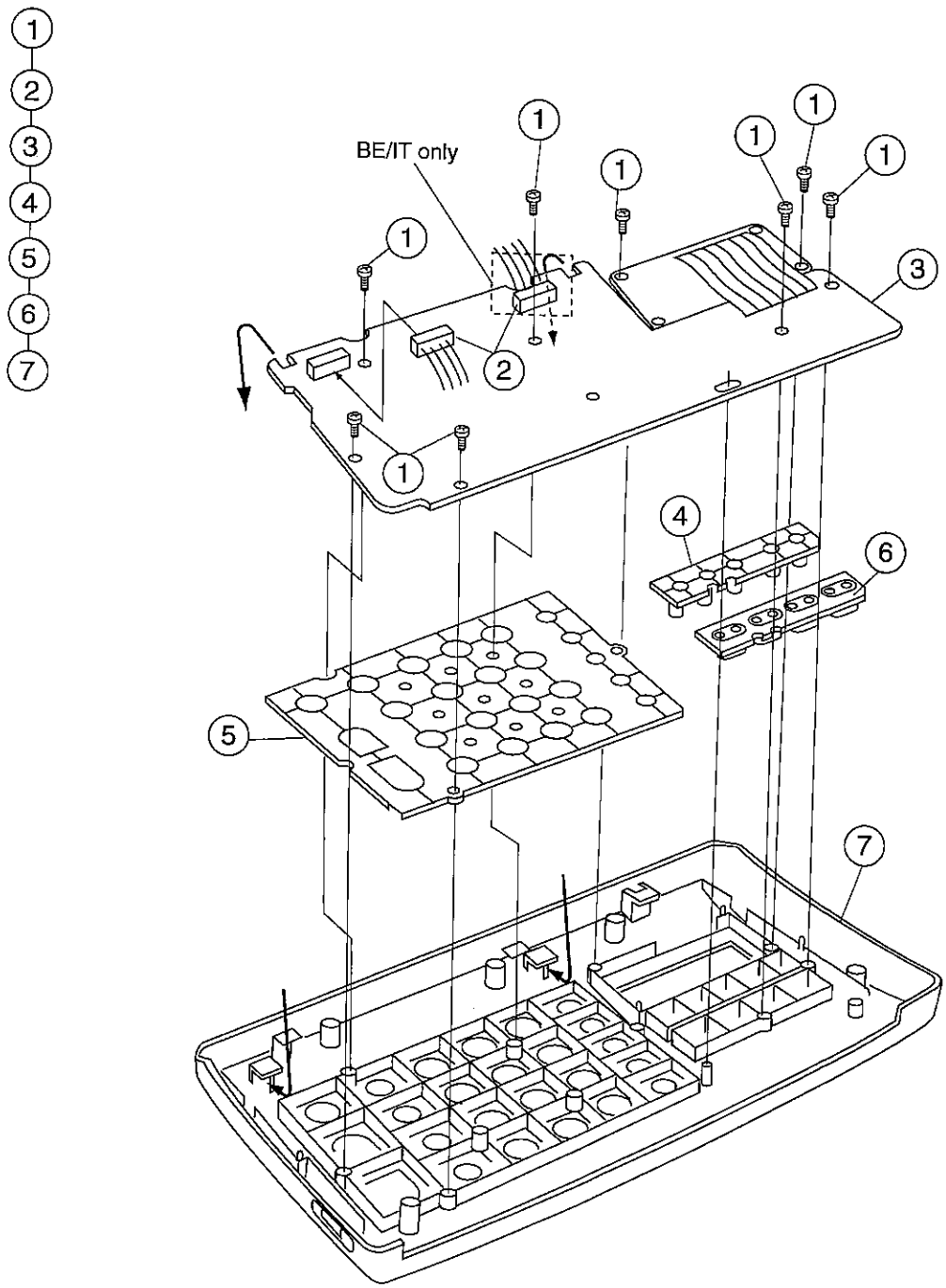


Fig. 8

9 Optical system unit

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 3-c.

d. Remove the optical system unit to the flowchart.

Parts list (Fig. 9)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	12	Screw (2×6)	3
2	Connector	1	13	LED	1
3	Connector	1	14	Blind sheet	2
4	Optical system unit	1	15	Screw (3×4)	1
5	Screw	2	16	Mirror holding spring 1	1
6	CCD PWB	1	17	Screw (3×4)	1
7	Shading sheet	1	18	Mirror holding spring 2	1
8	Screw (3×6)	2	19	Mirror 2	2
9	Lens holding spring	1	20	Mirror 1	1
10	Lens	1	21	Mirror cushion	2
11	Reader glass	1	22	Optical frame	1

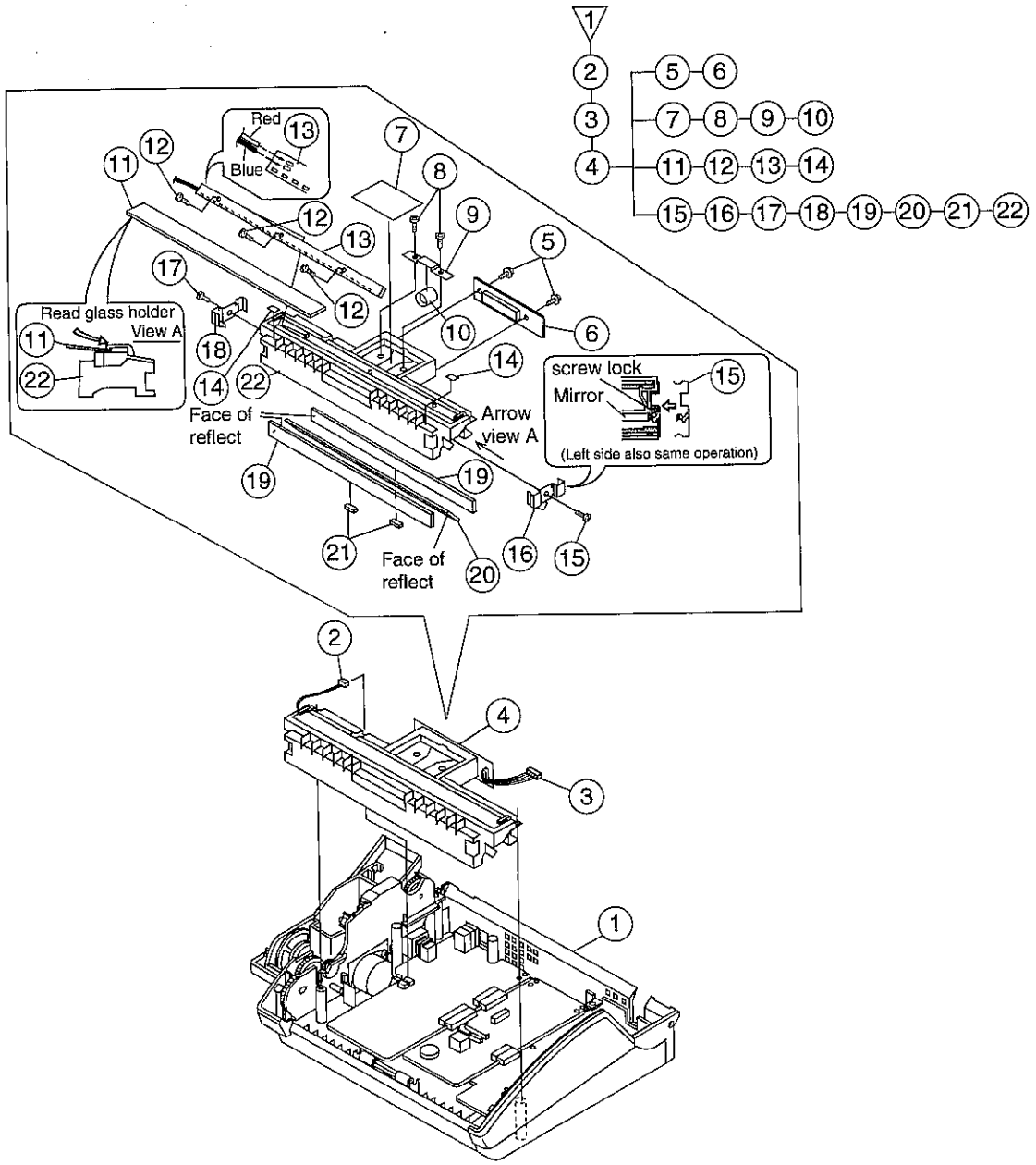


Fig. 9

[Note]

1. Attention the dection to arrow A.
2. Please don't touch to reflct face when fix the mirror to optical frame.
3. Check the dust tingerprints and damage when have a thats case clean by dry cloth.

10 Drive system unit and speaker (Non Cutter model)

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 5-c.

d. Remove the optical system unit from the mechanism unit according to procedure 9-d.

e. Remove the drive system unit and speaker to the flowchart.

Parts list (Fig. 10)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	18	Reduction gear A	1
2	Screw (3×8)	1	19	Idler gear A	1
3	Connector	1	20	Idler gear C	1
4	Drive system unit	1	21	Idler gear B	1
5	Hook switch lever A	1	22	Planet gear lever A	1
6	Connector	1	23	Planet gear spring	1
7	Speaker	1	24	Planet gear	1
8	Screw (3×6)	2	25	Planet gear lever B	1
9	Motor earth cable	1	26	Planet gear spring	1
10	Motor	1	27	Planet gear	1
11	Heat sink	1	28	Drive system mounting frame	1
12	Cam hold spring	1			
13	Cam B	1	29	Pinch pressing spring 2	1
14	Cam A	1	30	Pinch roller 2	1
15	Detection switch	1	31	Screw (2×8)	2
16	Idler gear A	2	32	Connector	1
17	Reduction gear B	1	33	Buzzer	1

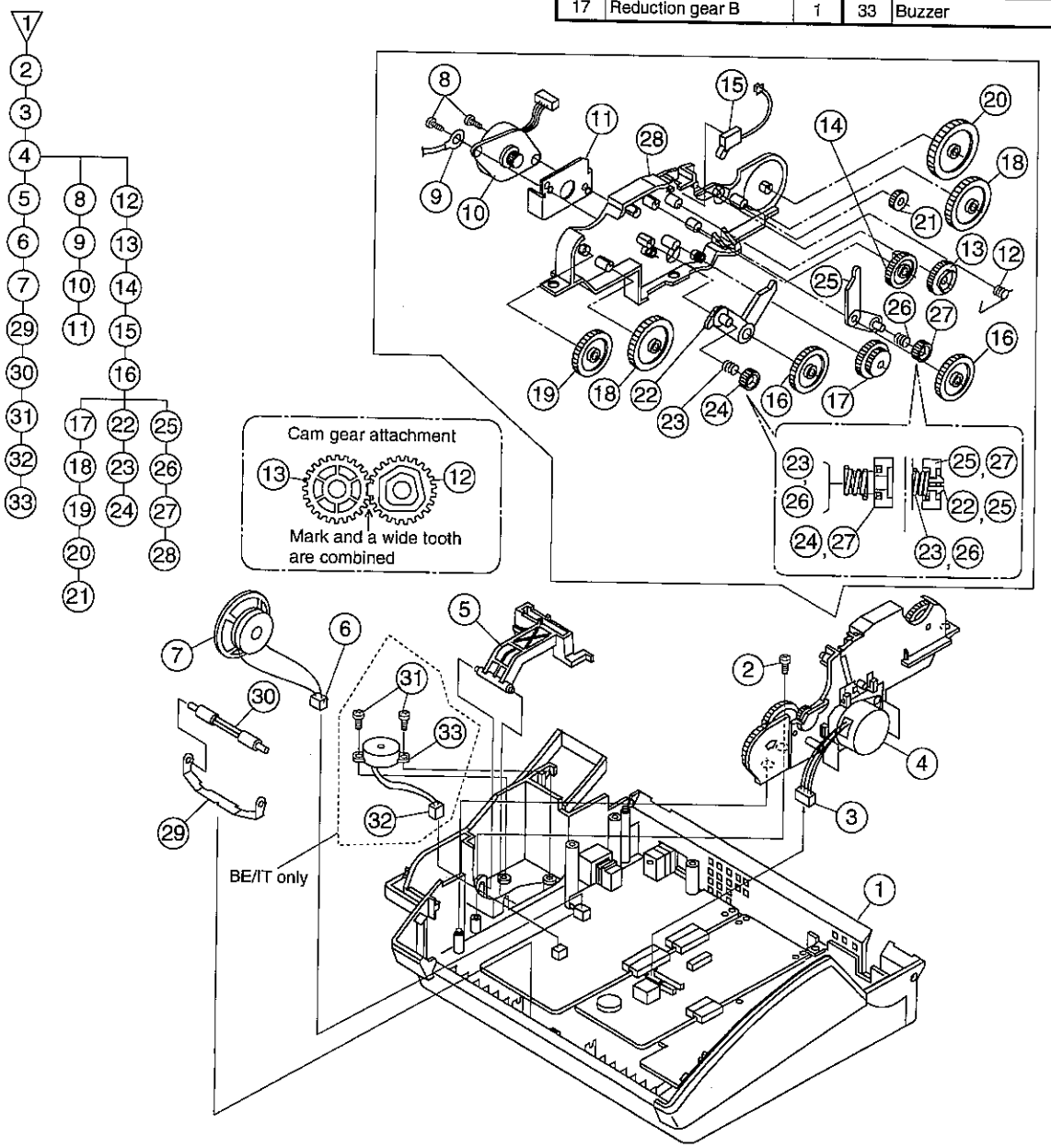


Fig. 10

11 Drive system unit and speaker (Cutter model)

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 5-c.

d. Remove the optical system unit from the mechanism unit according to procedure 9-d.

e. Remove the drive system unit and speaker to the flowchart.

Parts list (Fig. 11)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	20	Idler gear C	1
2	Screw (3×8)	1	21	Idler gear B	1
3	Connector	1	22	Planet gear lever A	1
4	Drive system unit	1	23	Planet gear spring	1
5	Hook switch lever A	1	24	Planet gear	1
6	Connector	1	25	Planet gear lever B	1
7	Speaker	1	26	Planet gear spring	1
8	Screw (3×6)	2	27	Planet gear	1
9	Motor earth cable	1	28	Drive system mounting frame	1
10	Motor	1			
11	Heat sink	1	29	Pinch pressing spring 2	1
12	Cam hold spring	1	30	Pinch roller 2	1
13	Cam B	1	31	Change springe	1
14	Cam A	1	32	Change lever	1
15	Detection switch	1	33	Platen gear	1
16	Idler gear A	2	34	Screw (2×8)	2
17	Reduction gear B	1	35	Connector	1
18	Reduction gear A	1	36	Buzzer	1
19	Idler gear A	1			

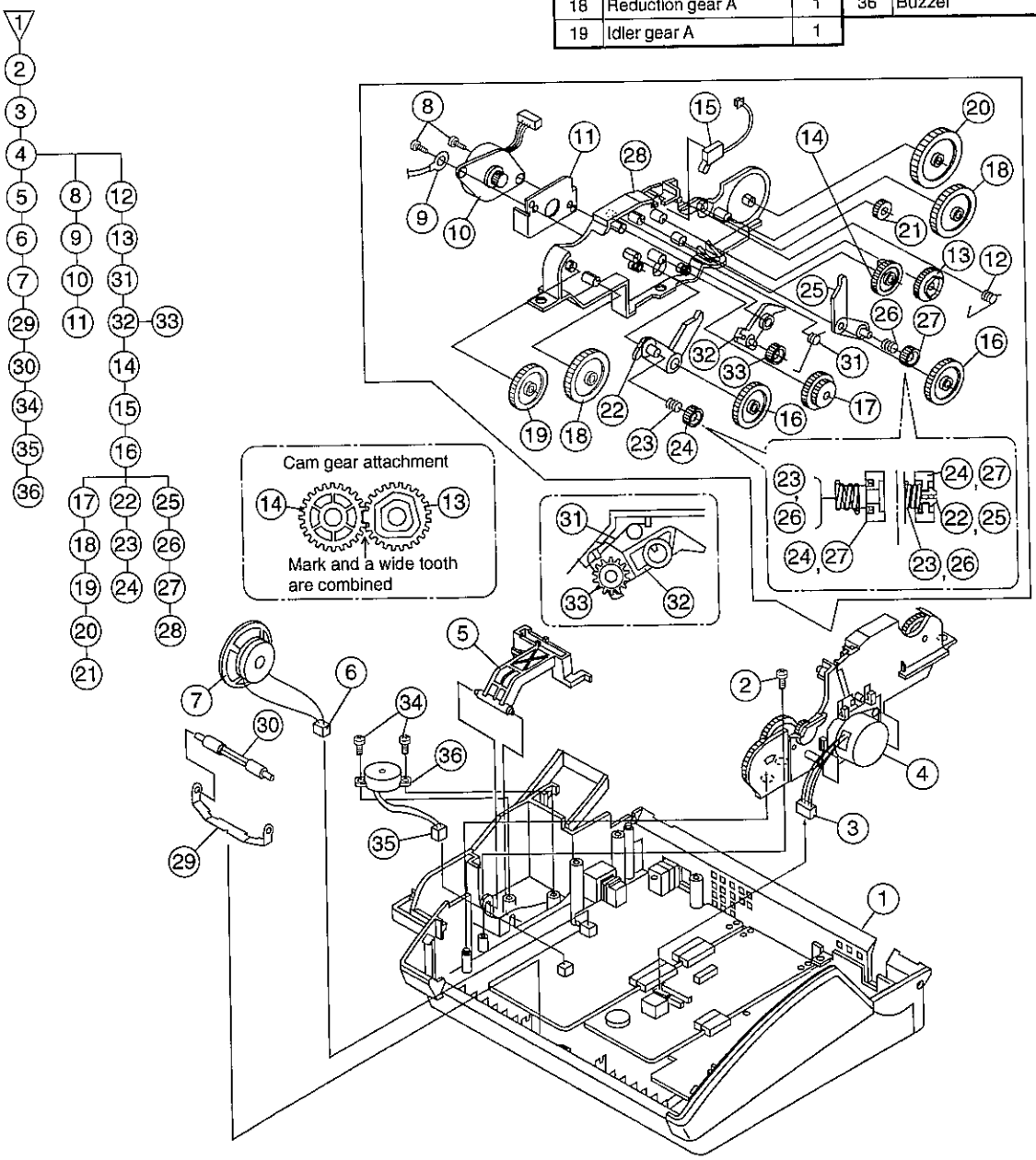


Fig. 11

12 PWB section

a. Remove the recording paper cover unit, ROM cover and head cover from the mechanism unit according to procedure 1-a, 2-a.

b. Remove the head frame unit from the mechanism unit according to procedure 3-b.

c. Remove the document guide upper ass'y and document guide lower ass'y from the mechanism unit according to procedure 5-c.

d. Remove the optical system unit from the mechanism unit according to procedure 9-d.

e. Remove the drive system unit and speaker from the mechanism unit according to procedure 10-e, 11-e.

f. Remove the PWB's and AC cord to the flowchart.

Parts list (Fig. 12)

No.	Part name	Q'ty
1	Mechanism unit	1
2	Screw (4×6)	1
3	AC cord	1
4	Screw (3×8)	4
5	Screw (3×10)	1
6	TEL/LIU PWB	1
7	Control PWB	1
8	Power supply PWB	1
9	Isolation sheet	1

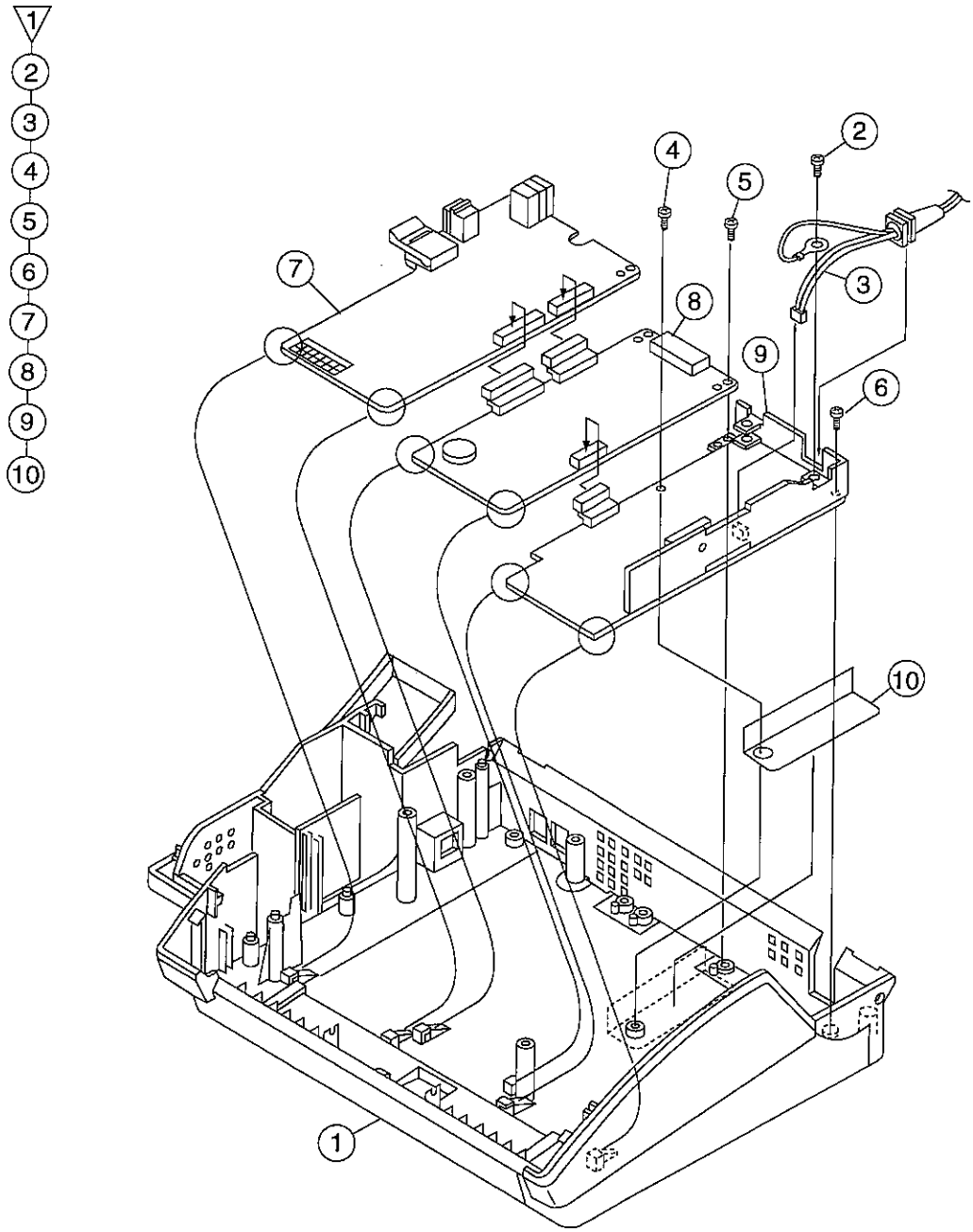


Fig. 12

13 Wire treatment

a. Perform wire treatment carefully and deliberately.

b. For wire treatment procedures which are not described in this section, refer to the section for that portion of the unit.

Parts list (Fig. 13)

No.	Part name	Q'ty
1	Band	5
2	Core	1
3	Core	2
4	Screw (3×6)	2

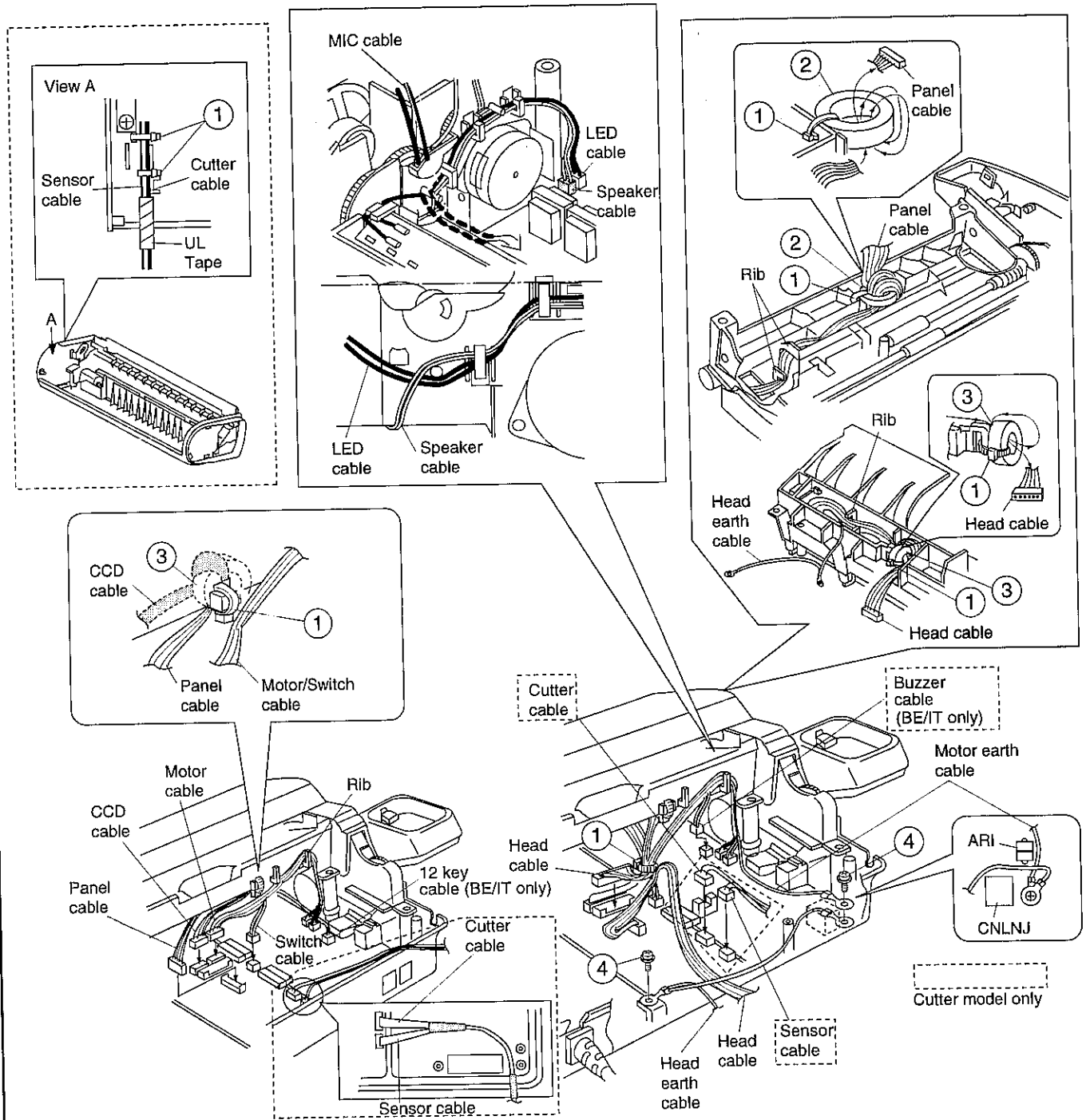
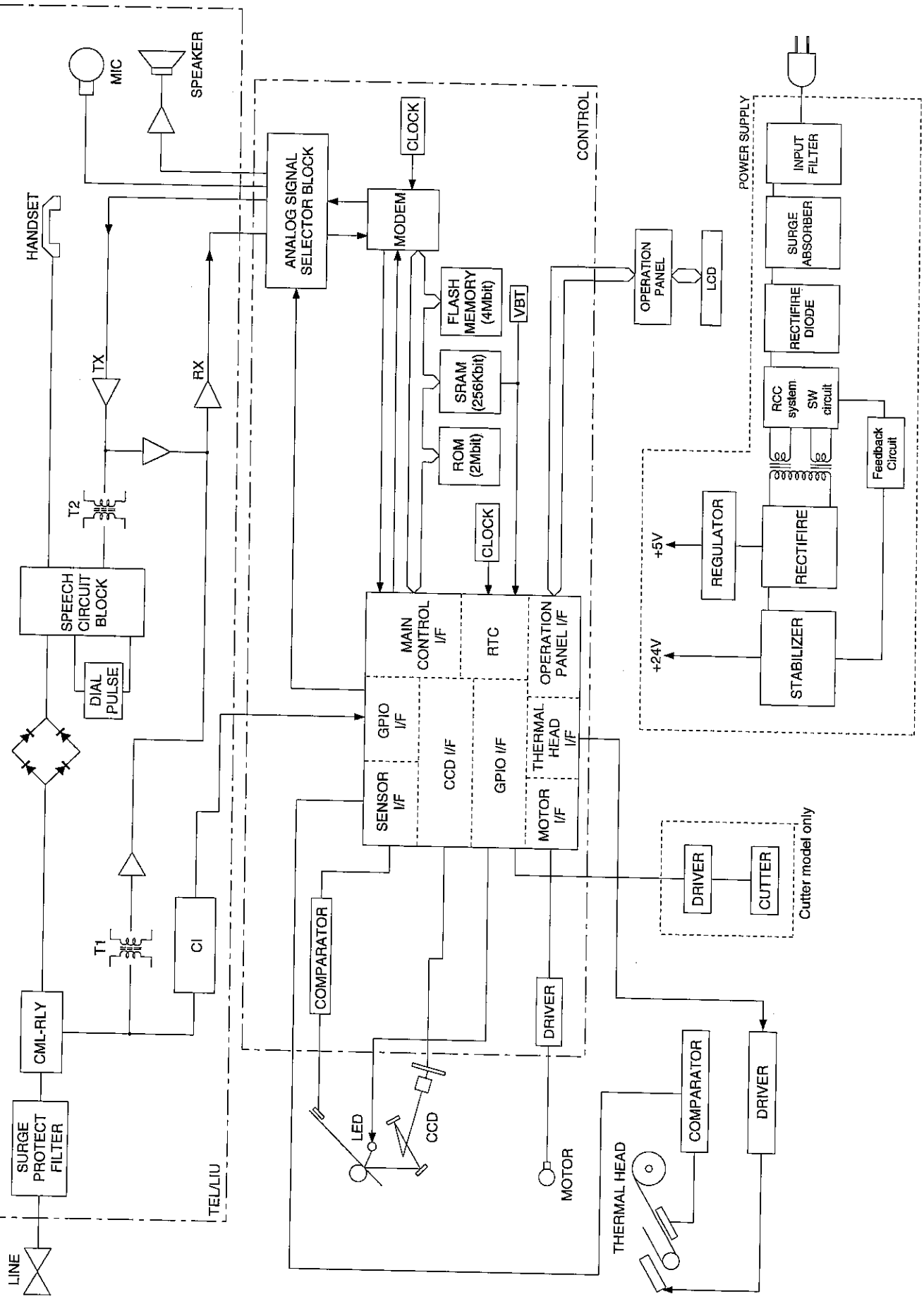


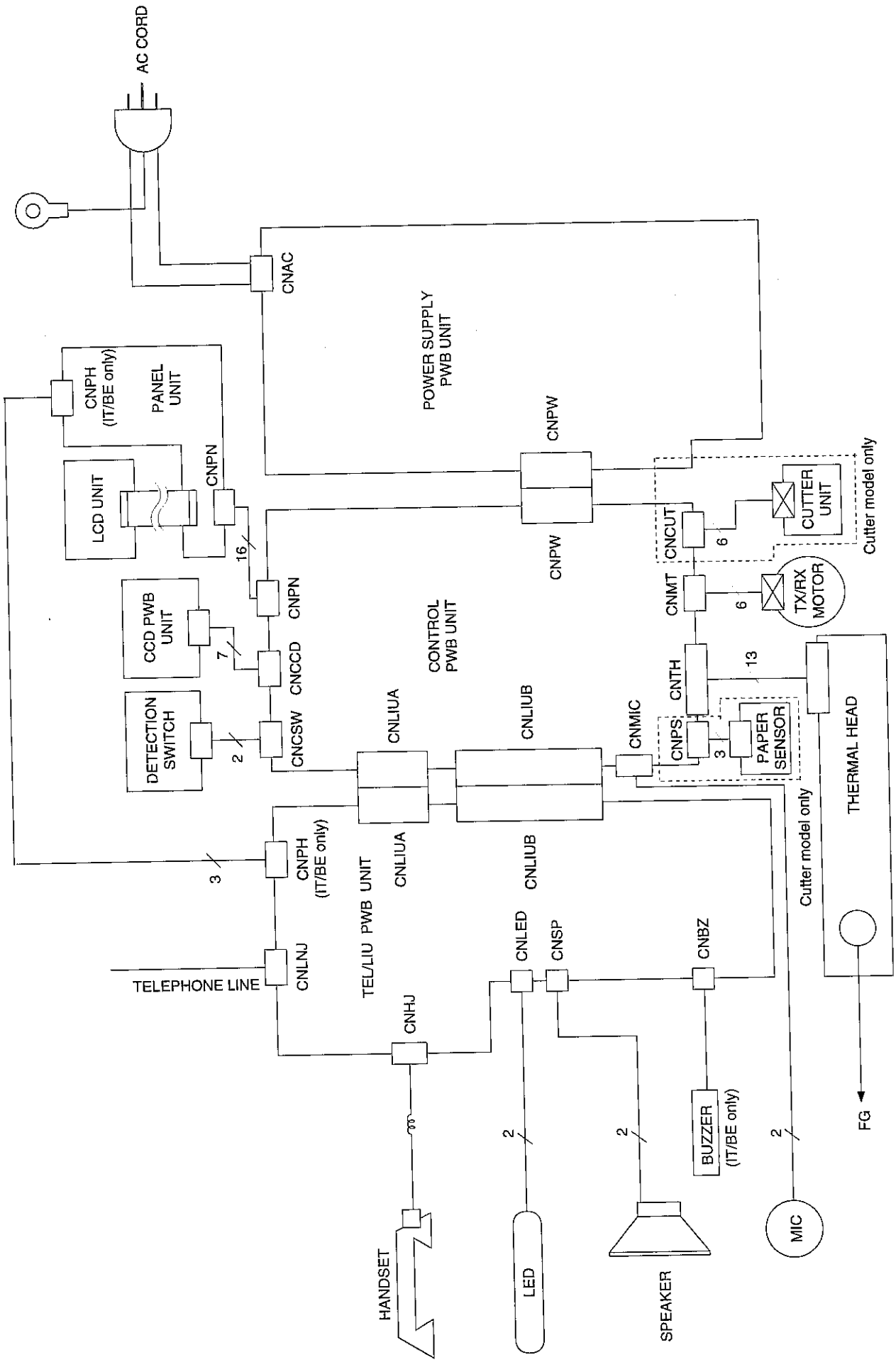
Fig. 13

CHAPTER 4. DIAGRAMS

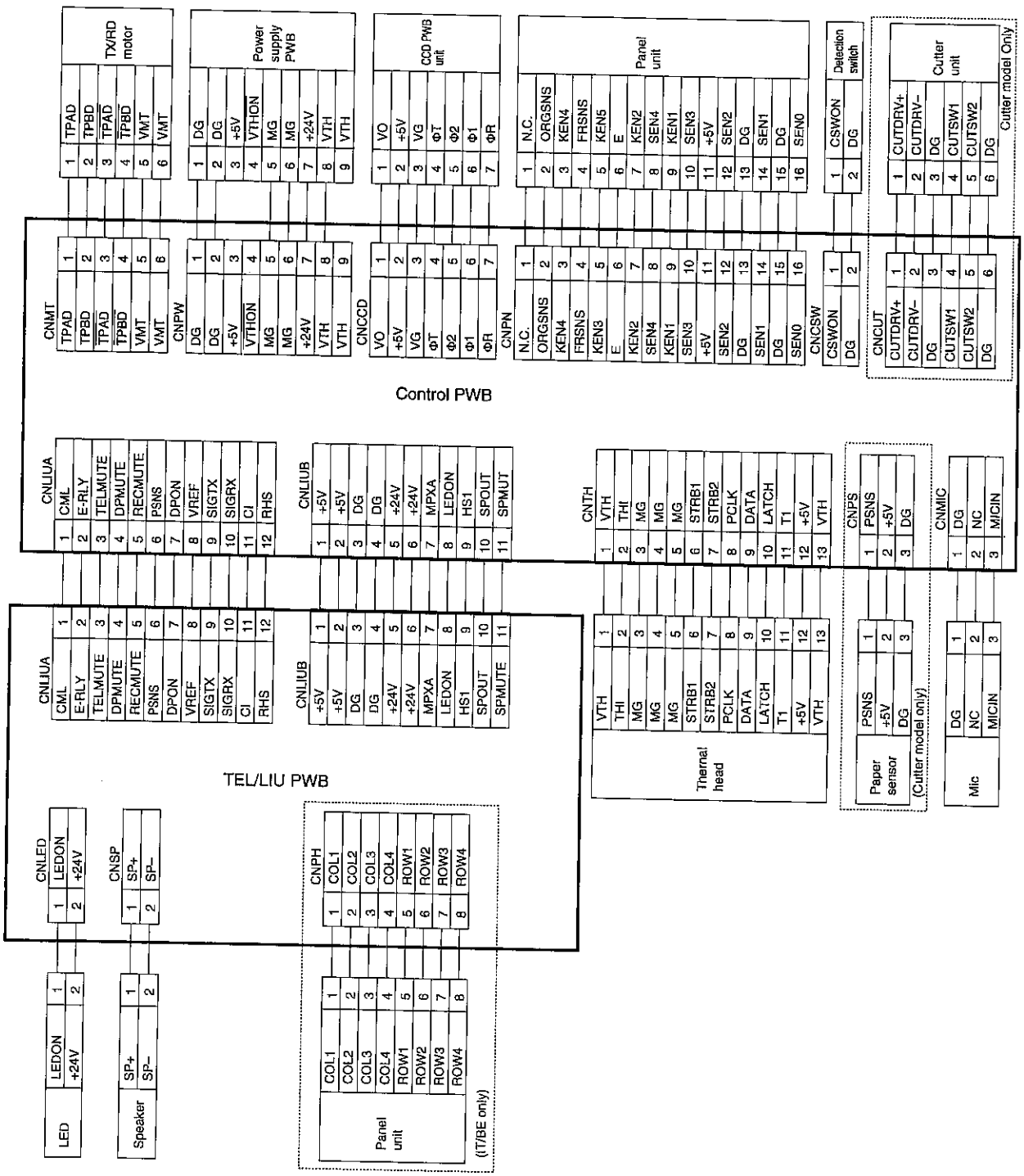
[1] Block diagram



[2] Wiring diagram



[3] Point-to-point diagram



CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

The compact design of the control PWB is obtained by using ROCKWELL fax engine in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

2. PWB configuration

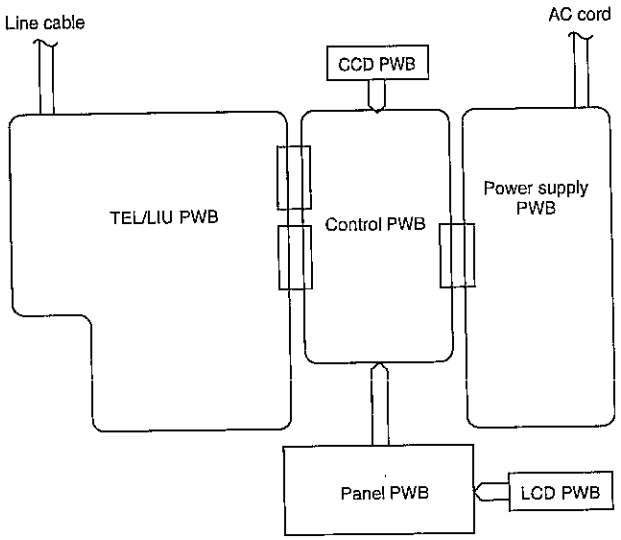


Fig. 1

1) Control PWB

The control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit.

This machine employs a 1-chip modem (RFX96V12) which is installed on the control PWB.

2) TEL/LIU PWB

This PWB controls connection of the telephone line to the unit.

3) Power supply PWB

This PWB provides voltages of +5V and +24V to the another PWB.

4) Panel PWB

The panel PWB allows input of the operation keys.

5) CCD PWB

This PWB controls the pickup optical device.

6) LCD PWB

This PWB controls the LCD display.

3. Operational description

Operational descriptions are given below:

- Transmission operation

  When a document is loaded in standby mode, the state of the document sensor is sensed via the 1 chip fax engine (SFE-LC). If the sensor signal was on, the motor is started to bring the document into the standby position. With depression of the START key in the off-hook state, transmission takes place.

  Then, the procedure is sent out from the modem and the motor is rotated to move the document down to the scan line. In the scan processor, the signal scanned by the CCD is sent to the internal image processor and the AD converter to convert the analog signal into binary data. This binary data is transferred from the scan processor to the image buffer within the RAM and encoded and stored in the transmit buffer of the RAM. The data is then converted from parallel to serial form by the modem where the serial data is modulated and sent onto the line.

- Receive operation

  There are two ways of starting reception, manual and automatic. Depression of the START key in the off-hook mode in the case of manual receive mode, or CI signal detection by the LIU in the automatic receive mode.

  First, the XFC-V controls the procedure signals from the modem to be ready to receive data. When the program goes into phase C, the serial data from the modem is converted to parallel form in the modem interface of the 1 chip fax engine (XFC-V) which is stored in the receive buffer of the RAM. The data in the receive buffer is decoded software-wise to reproduce it as binary image data in the image buffer. The data is DMA transferred to the recording processor within the main control gate array which is then converted from parallel to serial form to be sent to the thermal head. The data is printed line by line by the XFC-V which is assigned to control the motor rotation and strobe signal.

- Copy operation

  To make a copy on this facsimile, the COPY key is pressed when the machine is in stand-by with a document on the document table and the telephone set is in the on-hook state.

  First, depression of the COPY key advances the document to the scan line. Similar to the transmitting operation, the image signal from the CCD is converted to a binary signal in the DMA mode via the 1 chip fax engine (XFC-V) which is then sent to the image buffer of the RAM. Next, the data is transferred to the recording processor in the DMA mode to send the image data to the thermal head which is printed line by line. The copying takes place as the operation is repeated.

[2] Circuit description of control PWB

1. General description

Fig. 2 shows the functional blocks of the control PWB, which is composed of 5 blocks.

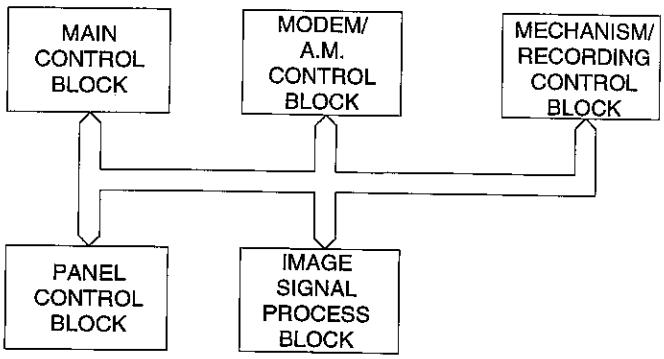


Fig. 2 Control PWB functional block diagram

2. Description of each block

(1) Main control block

The main control block is composed of ROCKWELL 1 chip fax engine (XFC-V), ROM (256KByte), RAM (8KByte). Devices are connected to the bus to control the whole unit.

1) XFC-V (IC5) : pin-144 QFP (XFC-V)

The FAXENGINE Integrated Facsimile Controllers.

XFC-V, contains an internal 8 bit microprocessor with an external 16 Mbyte address space and dedicated circuitry optimized for facsimile image processing and facsimile machine control and monitoring.

2) 27C020 (IC4): pin-32 DIP (ROM)

EPROM of 2Mbit equipped with software for the main CPU.

3) M5M5255KP-70L (IC2): pin-28 SOP (RAM)

Line memory for the main CPU system RAM area and coding/decoding process. Used as the transmission buffer, and buffer for access of Flash memory.

Memory of recorded data such as daily report and auto dials. When the power is turned off, this memory is backed up by the lithium battery.

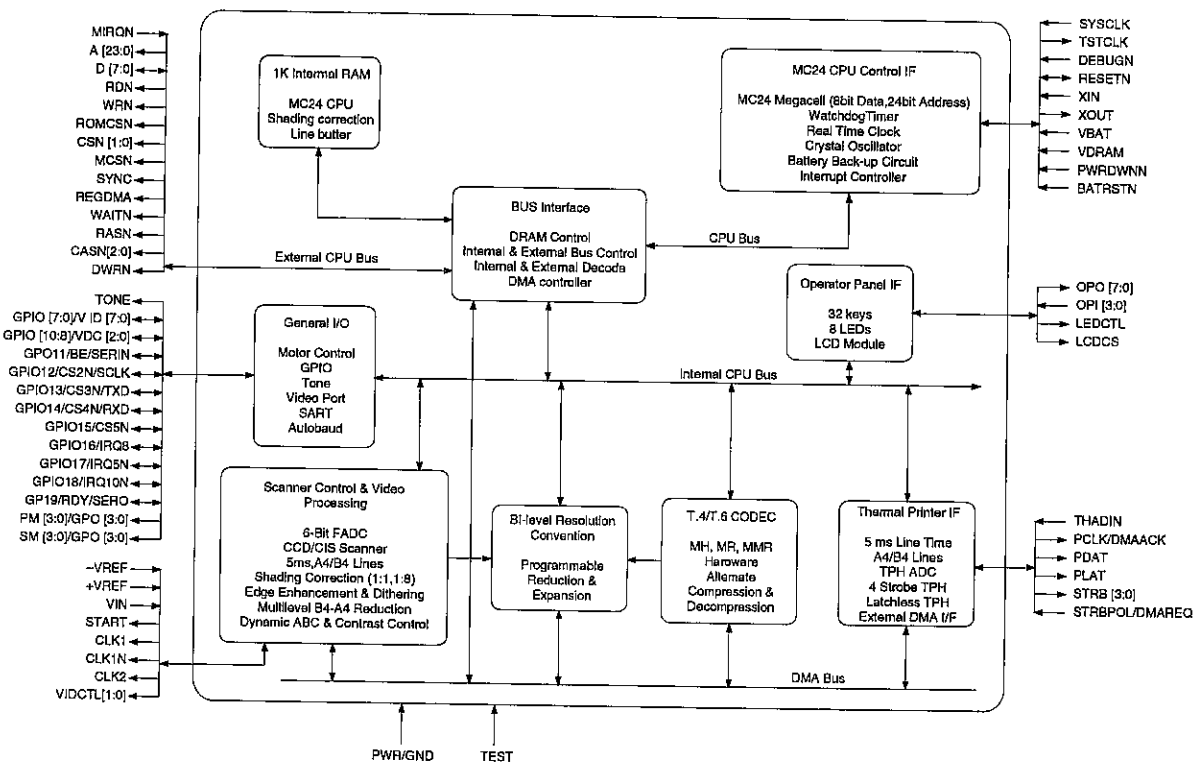


Fig. 3

XFC-V (IC5) terminal descriptions

Pin Name	Pin No.	I/O	Input Type	Output Type	Pin Description (Active low signals have an "n" pin name ending.)
			CPU Control Interface		
MIRQn	135	I	HU	–	Modem interrupt, active low. (Hysteresis In, Internal Pullup.)
SYSCLK	133	I	H	–	System clock. (Hysteresis In.)
TSTCLK	130	O	–	3XC	Test clock.
			Bus Control Interface		
A[23:0]	[1:6][8:13] [15:20][22:27]	O	T	3XT	Address bus (24-bit).
D[7:0]	[136:139] [141:144]	I/O	T	3XT	Data bus (8-bit).
RDn	128	O	–	3XTT	Read strobe.
WRn	127	O	–	3XTT	Write strobe.
ROMCSn	120	O	–	2XT	ROM chip select.
CS1n	122	O	–	2XT	I/O chip select.
CS0n	57	O	–	2XTT	SRAM chip select. (Battery powered.)
MCSn	121	O	–	2XC	Modem chip select.
SYNC	126	O	–	2XC	Indicates CPU op code fetch cycle (active high).
REGDMA	124	O	–	3XC	Indicates REGSEL cycle and DMA cycle.
WAITn	125	O	–	3XC	Indicates current TSTCLK cycle is a wait state or a halt state.
RASn	113	O	–	3XTT	DRAM row address select.
CAS[2:0]n	[110:112]	O	–	2XTT	DRAM column address select.
DWRn	109	O	–	3XTT	DRAM write.
			Prime Power Reset Logic and Test		
DEBUGn	129	I	HU	–	External non-maskable input (NMI).
RESETn	131	I/O	HU	2XO	XFC Reset.
TEST	58	I	C	–	Sets Test mode (battery powered).
			Battery Power Control and Reset Logic		
XIN	59	I	OSC	–	Crystal oscillator input pin.
XOUT	60	O	–	OSC	Crystal oscillator output pin.
PWRDWNn	62	I	H	–	Indicates loss of prime power (results in NMI).
BATRSTn	61	I	H	–	Battery power reset input.
			Scanner Interface		
START	101	O	–	2XS	Scanner shift gate control.
CLK1	100	O	–	2XS	Scanner clock.
CLK1n	99	O	–	2XS	Scanner clock-inverted.
CLK2	98	O	–	2XS	Scanner reset gate control (or clock for CIS scanner).
VIDCTL[1:0]	[97:96]	O	–	2XC	Control for video preprocessing circuits.
			Printer Interface		
PCLK/ DMAACK	29	O	–	3XC	Thermal Print Head (TPH) clock, or external DMAACK.
PDAT	30	O	–	2XP	Serial printing data (to TPH).
PLAT	31	O	–	3XP	TPH data latch.
STRB[3:0]	[33:36]	O	–	1XP	Strobe signals for the TPH.
STRBPOL/ DMARQ	37	I	C	–	Sets strobe polarity, active high/low or external DMAREQ.

Pin Name	Pin No.	I/O	Input Type	Output Type	Pin Description
Operator Panel Interface					
OPO[7:0]	[38:40][42:44] [46:47]	O	–	2XL	Keyboard/LED strobe [7:0].
OPI[3:0]	[49:52]	I	HU	–	Keyboard return [3:0]. (Pullup. Hysteresis In.)
LEDCTL	55	O	–	4XC	Indicates outputs OPO [7:0] are for LEDs.
LCDCS	54	O	–	1XC	LCD chip select.
General Purpose I/O					
GPIO[7:0]/ VID[7:0]	[86:87][89:94]	I/O	H	2XC	Programmable: GPIO (8 lines) or video data bus.
GPIO[10:8]/ VDC[2:0]	[83:85]	I/O	H	2XC	Programmable: GPIO (3 lines) or video data control signals.
GPIO11/BE/ SERINP	82	I/O	H	1XC	Programmable: GPIO line, Bus Enable, serial data input (Autobaud).
GPIO12/ CS2n/SCLK	80	I/O	H	2XC	Programmable: GPIO line, I/O chip select or SCLK (SART).
GPIO13/ CS3n/TXD	79	I/O	H	2XC	Programmable: GPIO line, I/O chip select or TXD (SART).
GPIO14/ CS4n/RXD	78	I/O	H	2XC	Programmable: GPIO line, I/O chip select or RXD (SART).
GPIO15/ CS5n	77	I/O	H	2XC	Programmable: GPIO line or I/O chip select.
GPIO16/ IRQ8	76	I/O	H	1XC	Programmable: GPIO line or active high interrupt.
GPIO17/ IRQ5n	75	I/O	H	1XC	Programmable: GPIO line or active low interrupt.
GPIO18/ IRQ10n	74	I/O	H	1XC	Programmable: GPIO line or active low interrupt.
GPIO[19]/RDY /SEROUT	73	I/O	H	1XC	Programmable: GPIO line, Ready or Serial out (Autobaud).
Miscellaneous					
SM[3:0]/ GPO[7:4]	[103:106]	O	–	1XC	Programmable: scan motor control pins or GPO pins.
PM[3:0]/ GPO[3:0]	[115:118]	O	–	1XC	Programmable: print motor control pins or GPO pins.
TONE	119	O	–	1XC	Tone output signal.
Power, Reference Voltages, Ground					
–Vref	66	I	–VR	–	Negative Reference Voltage for Video A/D.
+Vref	68	I	+VR	–	Positive Reference Voltage for Video A/D.
ADGA	69		VADG		A/D Analog Ground.
ADVA	70		VADV		A/D Analog Power.
ADGD	72		VADG		A/D Digital Ground.
ADVD	71		VADV		A/D Digital Power.
VIN	67	I	VA	–	Analog Video A/D input.
THADI	65	I	TA	–	Analog Thermal A/D input.
VSS (12)	134, 132, 108, 95, 88, 64, 56, 53, 45, 28, 21,7				Digital Ground.
VDD (8)	140, 123, 102, 81, 48, 41, 32, 14				Digital Power.
VDRAM	114				Battery power for DRAM refresh.
VBAT	63				Battery Power, for RTC and SRAM.
No Connection					
NC	107				No connection.

(2) Panel control block

The following controls are performed by the XFC-V.

- Operation panel key scanning
- Operation panel LCD display

(3) Mechanism/recording control block

The following controls are performed by XFC-V.

- Motor control
- Thermal head control
- Cutter motor control
- Sensor detection

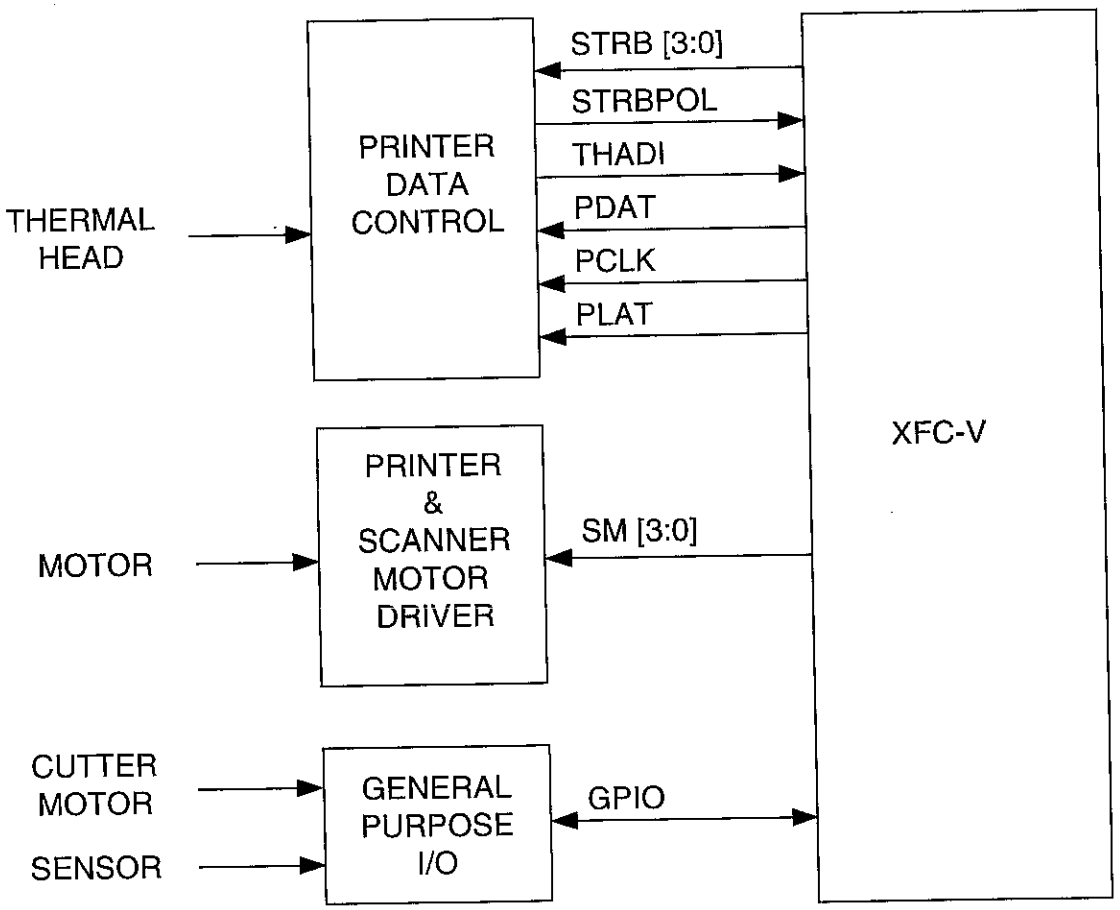
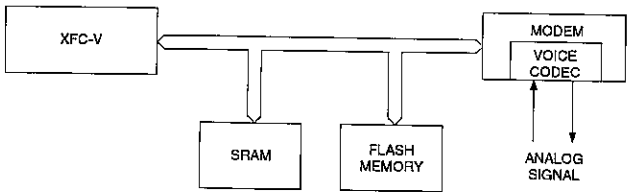


Fig. 4

(4) Modem/A.M. control block

In this block, the facsimile transmission/reception and voice rcording/playback are performed by using the modem built in the voice codec. The voice to be recorded is stored in the flash memory through the SRAM, and it is maintained without backup battery even if the power is turned off. Further, this memory is used as an image memory.



1) RFX96V12 (IC3): Pin 100 QFP

INTRODUCTION

The Rockwell RFX96V12 are MONOFAX facsimile modems featuring an advanced Rockwell proprietary voice compression algorithm. This algorithm can compress voice to 5.7 kbps with near toll quality playback, allowing up to 12 minutes of speech to be stored in 4 Mbits of memory. Facsimile modem and digital answering machine codec functions are integrated into a single device. This enables the manufacturer to cost-effectively add a digital answering machine to their facsimile machine design by using the RFX96V12 modem.

The modem can operate at 9600, 7200, 4800, 2400, or 300 bps. The modem can also perform HDLC framing according to T.30 at the same rates.

A programmable DTMF receiver and three programmable tone detectors are provided. The tone detectors operate concurrently with all modes.

The 5.7 kbps voice coder and decoder (codec) allows the host controller to efficiently store and playback digital incoming messages (ICMs) and outgoing messages (OGMs). This low-bit-rate voice codec, employing Rockwell's Proprietary Algorithm for the Compression of Speech^{TM} (RPACS^{TM}), provides three minutes of voice storage per 1 Mbit RAM or 12 minutes per 4 Mbit of RAM. Optional error correction coding allows stronge in audio grade RAMs (ARAMs). DTMF and tone detection are available during voice codec operation to support user selectable features. Echo cancellation techniques are employed during playback to allow DTMF and tone detection.

General purpose input (GPI) and general purpose output (GPO) pins are available for host assignment.

The modem is housed in a 100-pin PQFP. The modem's small size and single voltage supply allow the design of compact systems.

2) LH28F004SUT (IC1): Pin 40, TSOP
This is a Mbit flash memory to store the voice data/image.

FEATURES

- Group 3 facsimile transmission/reception
  - CCITT V.29, V.27 ter, T.30, V.21 Channel 2, T.4
  - HDLC framing at all speeds
  - Programmable turn-on and turn-off thresholds
  - Telephone line quality monitoring
  - Equalization
    - Automatic adaptive
    - Fixed and programmable digital compromise
- V.27 ter short train
- Caller ID reception
- 5.7 kbps RPACS voice codec
  - 12 minutes of voice storage per 4 Mbit memory
  - Near toll quality voice recording and playback of ICMs and OGMs
  - Error correction coding allows ARAM use at 5.9 kbps
  - DTMF and tone detection
  - Pitch synchronized fast and slow playback
  - Near-end echo cancellation
- Concurrent DTMF, FSK, and tone reception
- Programmable transmit level
- Receive dynamic range: 0 dBm to -43 dBm
- Programmable dual tone genaration
- Programmable tone detection
- Programmable interface memory interrupt
- Programmable ring detector
- 8-bit or 16-bit high quality audio mode transmission/reception
- DTE interface: two alternate ports
  - Selectable microprocessor bus (6500 or 8085)
  - CCITT V.24 (EIA/TIA-232-E compatible) interface
- TTL and CMOS compatible
- +5V operation
- Power consumption:
  - Normal: 500 mW (typical)
  - Sleep: 10 mW (typical)
- Single Package
  - 100-pin PQFP (plastic quad flat pack)
- Software compatible with other MONOFAX modems

RFX96V12 (IC3) Hardware Interface Signals

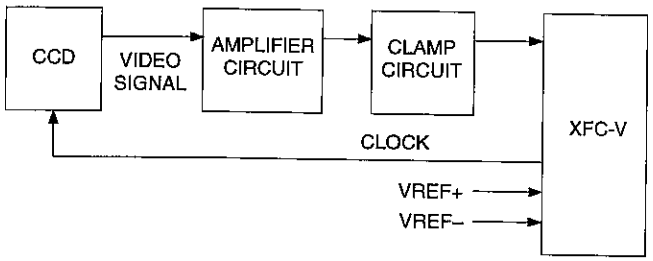
Pin Signals – 100-Pin PQFP

Pin No.	Signal Name	I/O Type
1	RS4	IA
2	RS3	IA
3	RS2	IA
4	RS1	IA
5	RS0	IA
6	VDD1	PWR
7	D7	IA/OB
8	D6	IA/OB
9	D5	IA/OB
10	D4	IA/OB
11	D3	IA/OB
12	D2	IA/OB
13	D1	IA/OB
14	D0	IA/OB
15	WRITEn	IA
16	DGND1	GND
17	RXOUT	MI
18	RMOVE	MI
19	TSTROBE	MI
20	TRESET	MI
21	DGNDA1	GND
22	NC	
23	TMODE	MI
24	TXDAT	MI
25	AVDD	PWR
26	TALKn	OD
27	AGND1	GND
28	TXA1	O (DD)
29	TXA2	O (DD)
30	DGNDA2	GND
31	NC	
32	NC	
33	NC	
34	NC	
35	VAA1	PWR
36	SLEEPn	MI
37	AGND2	GND
38	RIN	I (DA)
39	VC	MI
40	VREF	MI
41	NC	
42	NC	
43	DGNDA3	GND
44	SPKR	O (DF)
45	VAA2	PWR
46	OHn	OD
47	PORn	MI
48	CLKIN	MI
49	NC	
50	IACLK	MI
51	NC	
52	CSn	IA
53	READn	IA
54	GPI2	IA
55	GPI3	IA
56	GPI4	IA
57	GPI5	IA
58	VDD2	PWR
59	GPI6	IA
60	GPI7	IA
61	GPO7	OB
62	GPO6	OB
63	GPO5	OB
64	GPO4	OB
65	GPO3	OB
66	DGND2	GND
67	CTSn	OA
68	IRQ1n	OC
69	GPO2	OB
70	GPO1	OB
71	GPO0	OB
72	RESETn	OA
73	XTLI	I
74	XTLO	O
75	XCLK	OD
76	YCLK	OD
77	VDD3	PWR
78	IRQ2n	OC
79	SR3IN	MI
80	DGND3	GND
81	DGND4	GND
82	SR4IN	MI
83	SR3OUT	MI
84	EYESYNC	OA
85	EYECLK	OA
86	IA1CLK	MI
87	SA1CLK	MI
88	SR1IO	MI
89	EYEXY	OA
90	SR4OUT	MI
91	NC	
92	RLSDn	OA
93	DCLK	OA
94	EN85n	IA
95	GPI0	IA
96	RTSn	IA
97	DGND5	GND
98	GPI1	IA
99	TXD	IA
100	RXD	OA

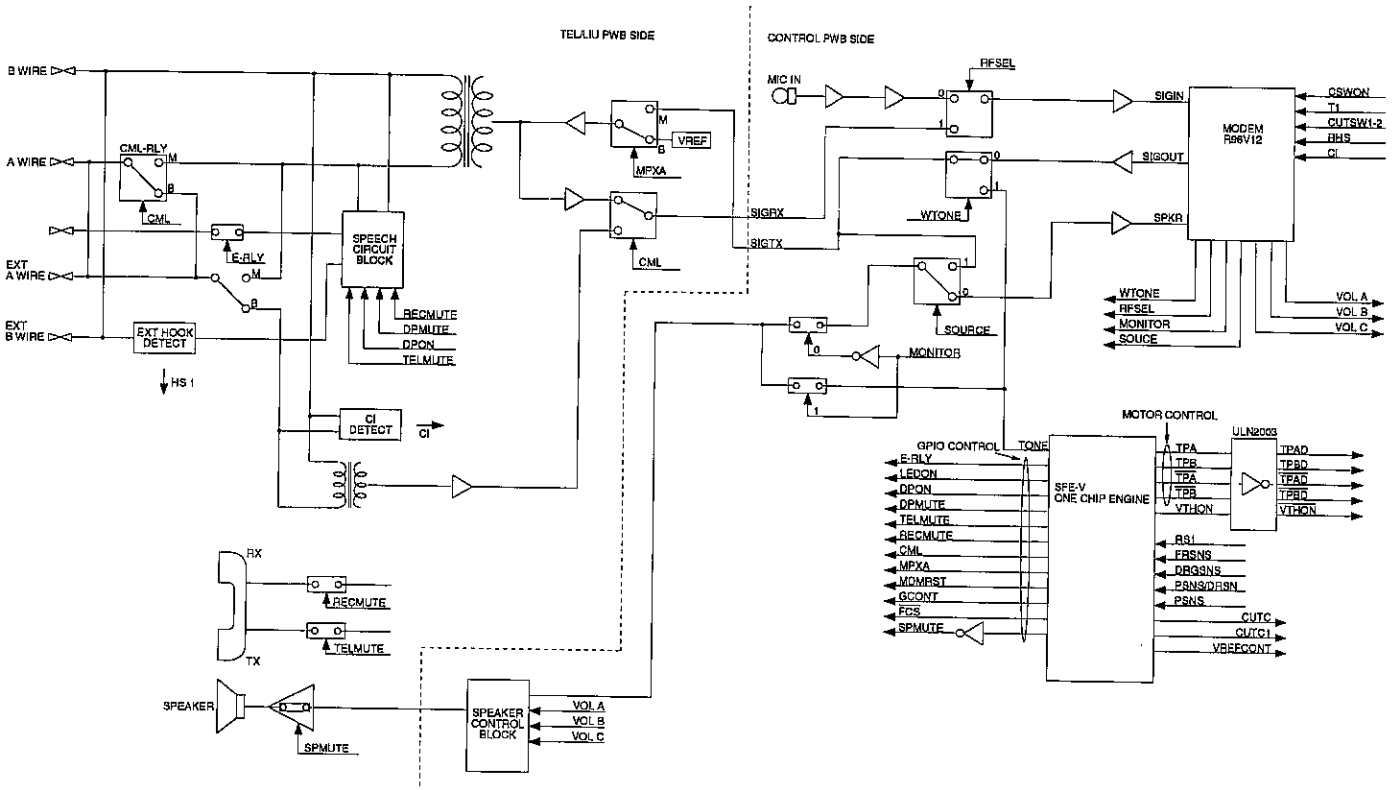
Notes:

1. NC = No connection; leave pin disconnected (open).

(5) Image signal process block



The CCD is driven by the 1-chip engine (XFC-V), and the output video signal from the CCD is input into the XFC-V through the amplifying circuit and clamp circuit.
The ADC and buffer are provided in the XFC-V, and the digital image processing is performed.



Voice routes in answering mode

① OGM recording route
The voice signal is input from the microphone, and sent to the modem through the IC104 (RFSEL).

② ICM recording route
The voice signal is sent from the LINE to the modem through CML, TI, and IC104 (RFSEL) in this order.

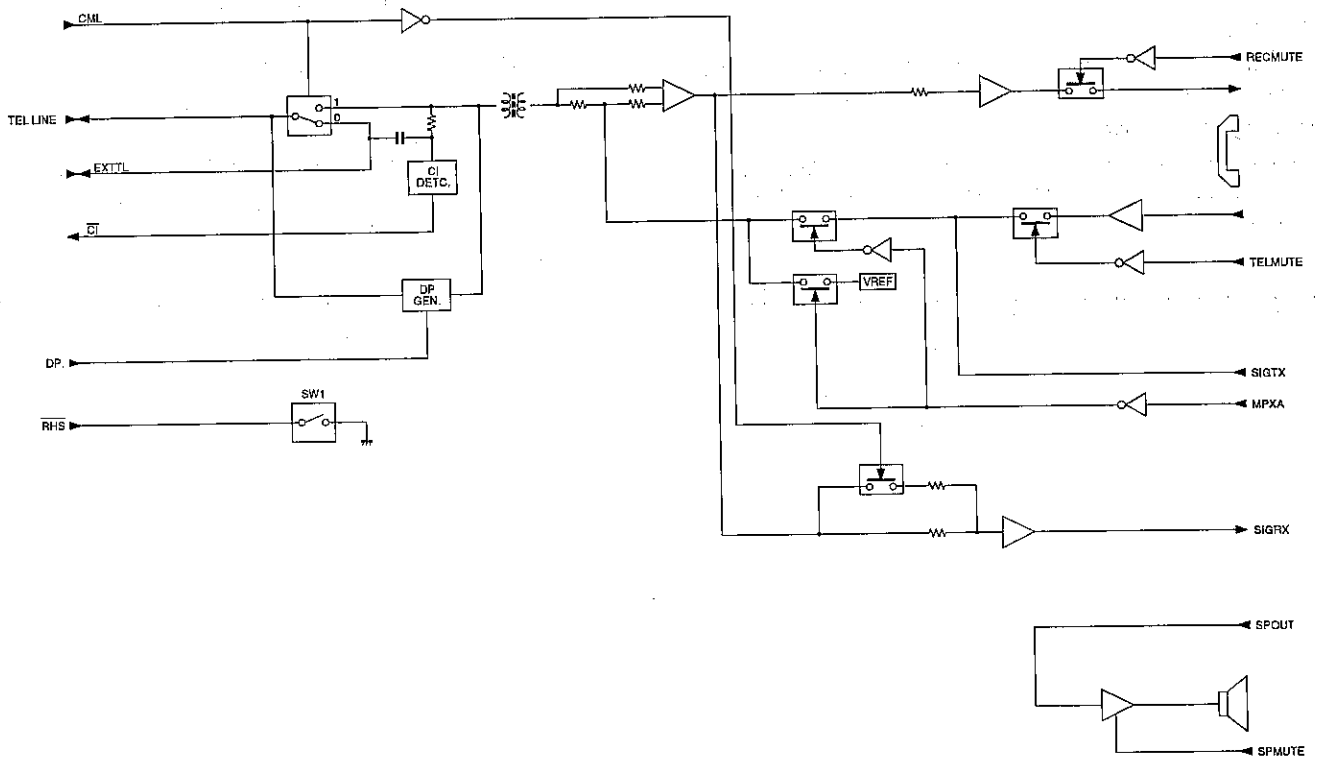
③ OGM/ICM speaker output route
The playback sound is output from the TXA terminal of modem, and is output to the speaker through IC104 (WTONE), IC108 (SOURCE), IC 104 (MONITOR), and IC101.

④ OGM/ICM line output route
The playback sound is output from the TXA terminal of modem, and is output to the line through IC104 (WTONE), IC103 (MPXA), T1, and CML.

[3] Circuit Description of TEL/LIU PWB (UX-81AAT)

(1) TEL/LIU block operational description

1) Block diagram



2) Circuit description

The TEL/LIU PWB is composed of the following 11 blocks.

1. Surge protection circuit
2. Noise filter
3. Dial pulse generation circuit
4. CML relay
5. Matching transformer
6. Hybrid circuit
7. Speaker amplifier
8. Signal selection
9. Sensor circuit
10. CI detection circuit
11. Power supply and bias circuit

3) Block description

1. Surg Protection circuit

This circuit protects the circuit from the surge voltage occurring on the telephone line.

- The AR1, AR2 protects the circuit from the 425V or higher line surge voltages.

2. Noise filter

The noise filter comprises the RF choke coil, L2.

3. Dial pulse generation circuit

The pulse dial generation circuit comprises the photo-coupler PC2, PC3, polarity guard REC1, and resistor R5.

The photo-coupler PC2 shunts the line current using the DP signal before transmitting the dial signal, then turns off the CML relay.

After the pulse dial signal is transmitted by turning on/off the DP signal, the CML relay is turned on again.

4. CML relay

The CML relay switches over connection to the matching transformer T1 while the FAX or built-in telephone is being used.

5. Matching transformer

The matching transformer performs electrical insulation from the telephone line and impedance matching for transmitting the TEL/FAX signal.

6. Hybrid circuit

The hybrid circuit performs 2-wire-to-4-wire conversion using the IC101 of operational amplifier, transmits the voice transmission signal to the line, and feeds back the voice signal to the voice reception circuit as the side tone. Also, this circuit is operated with the analog switch IC103 as a half-duplex circuit while the FAX is being used, and as a full-duplex circuit while the telephone is being used.

The R133, C6, C118, C114, C112, and C122 suppress the radio pickup from the handset.

7. Speaker amplifier

The speaker amplifier monitors the line under the on-hook mode, outputs the buzzer sound generated from the gate array (IC5: control PWB), ringer sound, DTMF generated from the modem, and line sound.

The buzzer volume is fixed. However, the volume of other sounds can be continuously adjusted using the volume control VR1.

8. Signal selection

The following signals are used to control the transmission line of TEL/FAX signal. For details, refer to the signal selector matrix table. (See page 5-13)

- TEL MUTE: Controls the mute of handset voice transmission signal.
- REC MUTE: Controls the mute of handset voice reception signal.
- SP MUTE: Controls the mute of speaker amplifier.
- MPX A: Mutes the transmission drive amplifier.
  - H: Selected when the telephone is being used or when the FAX signal is being transmitted
  - L: Selected when the FAX signal is being received

9. Sensor circuit

For the recording paper sensor (PSNS), when there is recording paper, the photo transistor in the light receiving side is ON and the detection level is LOW. When there is no recording paper, the photo transistor in the light receiving side is OFF and the detection level is HIGH.

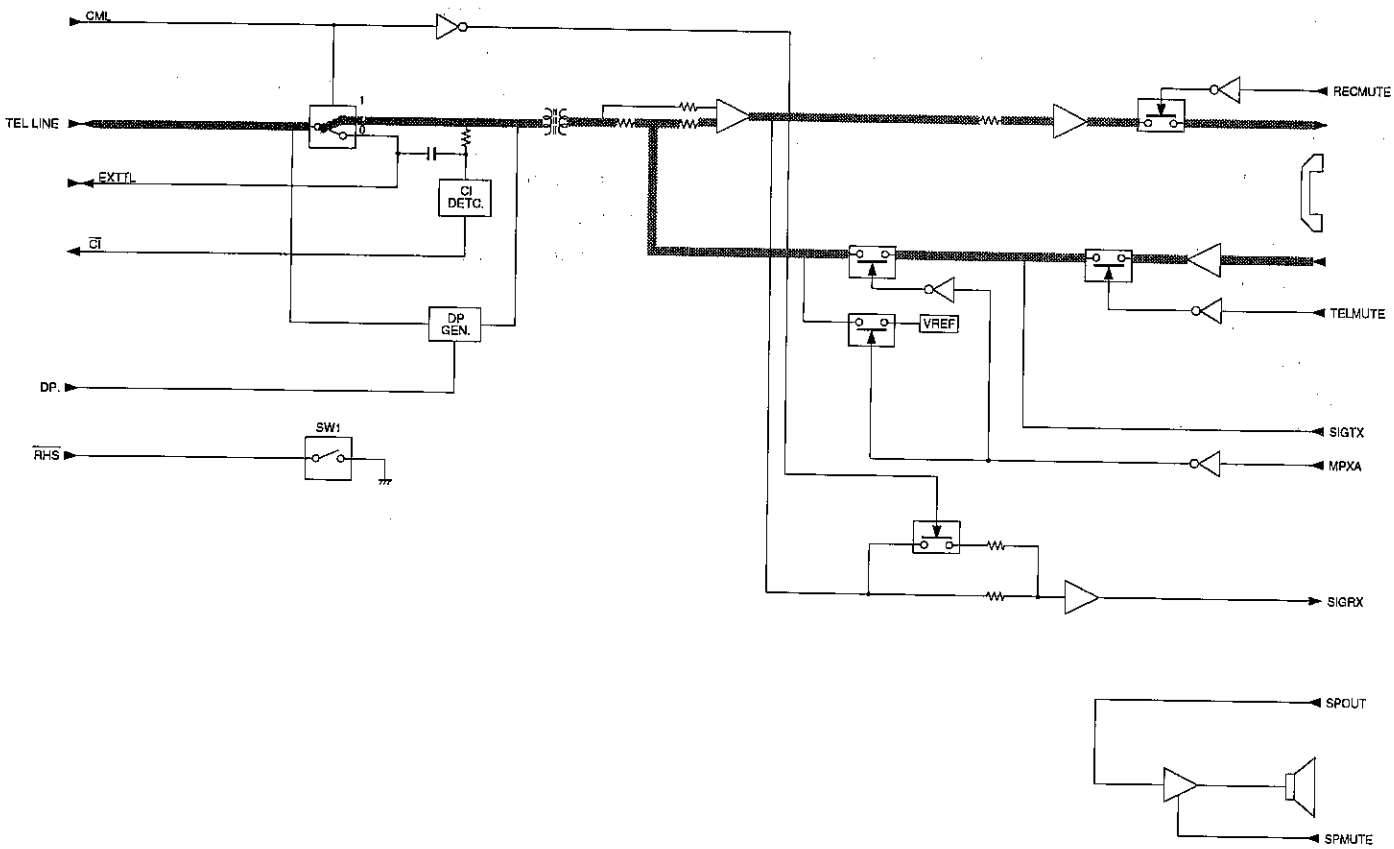
10. CI detection circuit

The CI detection circuit detects the CI signals. A CI signal, which is provided to the photo-coupler PC1 through the C17, R2, and ZD7 when the ring signal is inputted from the telephone line, is filtered by the R139 and C14, and then transmitted to the control PWB through the Q107.

11. Power supply and bias circuits

The voltages of +24V, and +5V Vref are supplied from the control PWB unit. The IC104 of operational amplifier generates 12V bias voltage.

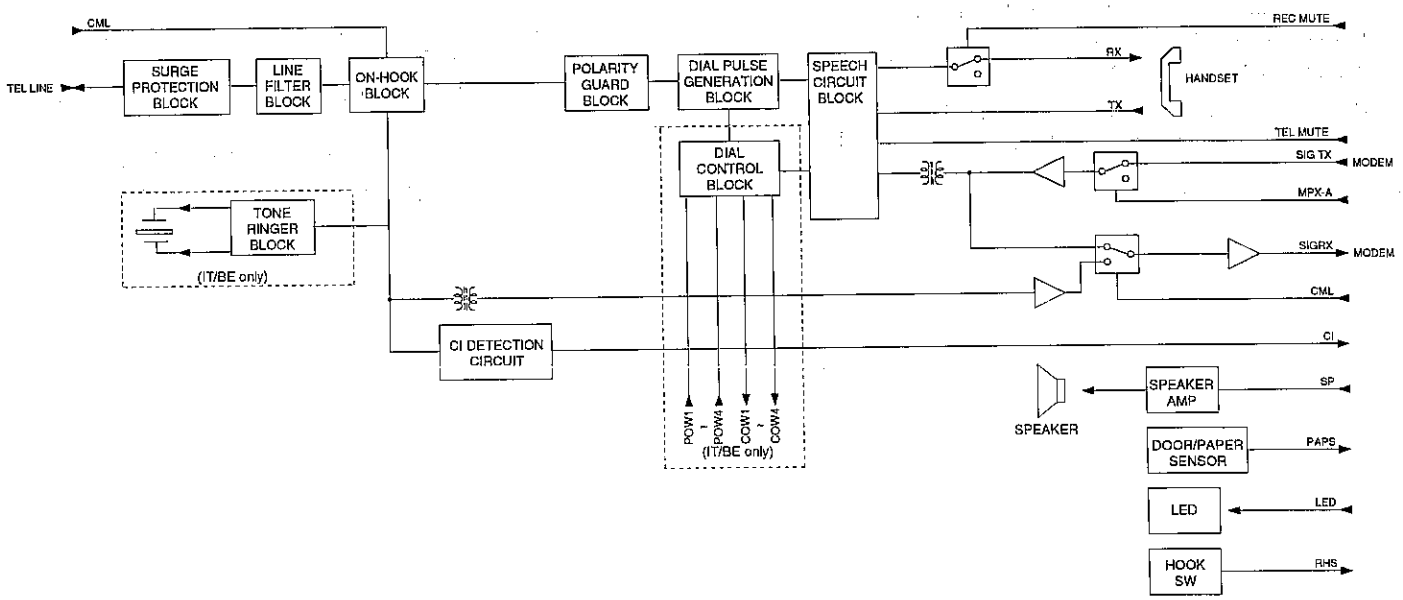
Signal flow when TEL speaking



[4] Circuit description of TEL/LIU PWB (UX-81ABE/ACH/AES/AIT/ANL/ASE/85AIT/FO-452IT)

(1) TEL/LIU block operational description

1) Block diagram



2) Circuit description

The TEL/LIU PWB is composed of the following 13 blocks.

1. Line filter block
2. CI block
3. Tone ringer block (IT/BE only)
4. Polarity guard block
5. Dial control block
6. Pulse transmitting block
7. ON-hook block
8. Hook detection block
9. Communication circuit block
10. Speaker amplifier block
11. Power supply and bias circuit
12. Sensor block
13. Signal selection

3) Block description

1. Line filter block

This block is composed of a (L1) and is used to remove noise from the telephone line.

2. CI block

This block is composed of a photo coupler (PC2) and is used to convert ringer signal into a digital signal.

3. Tone ringer block (IT/BE only)

This block is composed of ringer IC (IC105) and its peripheral circuits. When a call signal is inputted when the power is switched off only, the tone ringer block makes the piezo-electric buzzer ring.

4. Polarity guard block

This block is composed of diode bridge (REC1) and is used to supply a current and voltage of the same polarity to the telephone circuit regardless of reversion of polarity in the telephone circuit.

5. Dial control block

This block is composed of dialer IC (IC1) and crystal oscillator (×1). The dialer IC is controlled with 4-bit data from operation panel when the power is switched off. There is not used the dialer IC, when the power is switched on.

6. Pulse transmitting block

This block is composed of transistor (Q1), photo coupler (PC6) and zener diode. Dial pulses supplied from CPU are amplified by transistor (Q1) through a photo coupler (PC5) to the telephone line.

7. ON-hook block

This block is composed of CML relay (CML), and CML is for connection of the telephone line.

8. Hook detection block

This block is composed of hook switch (SW1), and is used to detect on/off of the hook switch and to inform CPU of connection/open of the telephone line.

9. Communication circuit block

This block is composed of the speech IC (IC2), and is equipped with 2-line/4-line select circuit, auto pad circuit, and all other circuit.

10. Speaker amplifier block

This block is composed of the speech amplifier IC (IC102), and is used to amplify voice signal in monitoring or in speaker reception with the amplifier IC and to supply to the speaker.

11. Power supply and bias circuit

The CI voltages of +24V and +5V are supplied from the control unit through the connector CNLIUB-1~6.

12. Sensor block

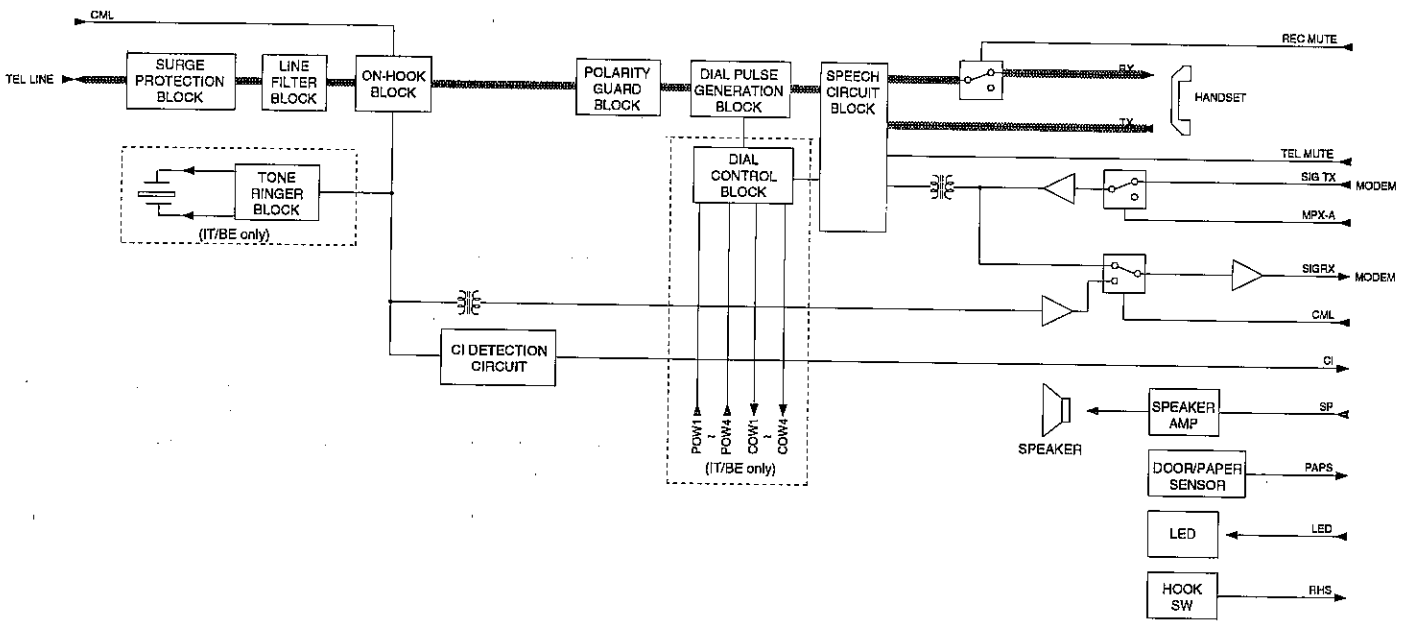
This block is composed of PSNS (PC4), and is used to sense the presence of recording paper and the cover open/close of the cover.

13. Signal selection

The following signals are used to control the transmission line of TEL/FAX signal.

- TEL MUTE : Controls the mute of handset voice transmission signal.
- REC MUTE: Controls the mute of handset voice reception signal.
- SP-MUTE: Controls the mute of speaker amplifier.
- MPX A: Mutes the transmission drive amplifier.
  - L: Selected when the FAX signal is being received
  - H: Selected when the telephone is being used or when the FAX signal is being transmitted

Signal flow when TEL speaking



[4] Circuit description of power supply PWB

1. Block diagram

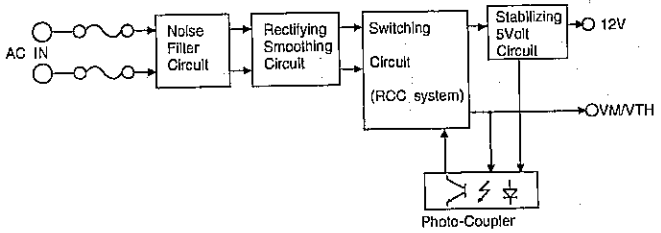


Fig. 1. Block diagram

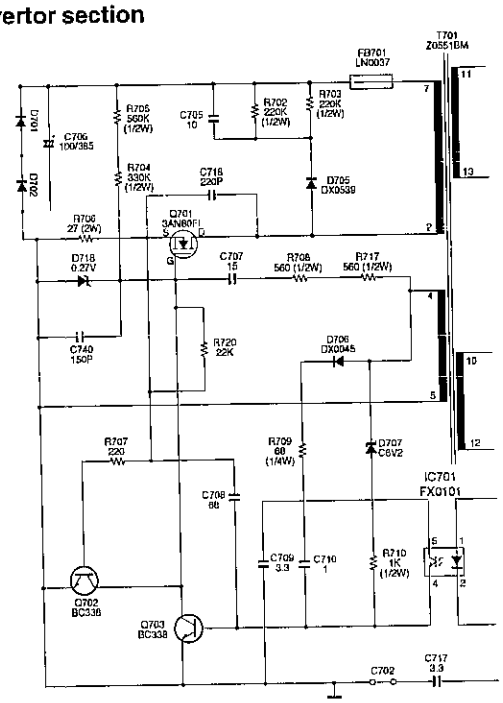
2. General description

The input voltage is 187V AC - 276V AC conforming to Safety standards. The outputs are +24V(VM), +5V. The overvoltage protection function for protection of the load in case of power abnormality and the overcurrent protection function for protection of the power supply itself from overload are added.

3. Operational description

When 220-230 V/AC power is supplied, it is passed through a noise filter to the rectifier section where it is smoothed to about 300V then supplied to the inverter section. The inverter section employs one-transistor ON/OFF self-excited invertor (R.C.C. system) and a stable DC voltage is supplied to the secondary side.
The operation of each section is described below:

3.1. Invertor section



When the voltage across R720 reaches the gate ON voltage through R705, R704, and R720, Q701 begins to turn ON, flowing a current from pin7 of T701 primary winding to pin2. Then a voltage is generated from pin5 of auxiliary winding to pin4, turning Q701 gate ON completely. The drain current increases linearly to store energy in the primary winding. However, voltage across R707 turns ON Q702 thorough R717 when the drain current reaches a certain level. As a result, Q701 gate voltage falls below the threshold voltage (about 4V) of the gate and Q701 turns off. Simultaneously when Q701 turns off, the energy stored in the primary winding is induced in the secondary winding to bias the rectifier diodes D719, D712, and D6 forwardly, smoothing each output capacitor. Thus a DC voltage is obtained.

3.2. Control section

(1) +24V (VM) control
A voltage is generated in the secondary side by repeated operations of 3.1, and the output in the secondary side is divided by R716, R741, and R715 to be inputted to Q705. The divided voltage is adjusted to about 6.2V by R741. Q705 always monitors the divided output voltage. When the output voltage exceeds +24V, the divided voltage also exceeds 6.2V and Q705 judges it as an increase in the output voltage. Then photocoupler is lit IC701 through R714 to turn on the transistor in the light receiving side, supplying a current to the base of Q703, turning off Q701. (The current which is to be passed through the additional line, R717, 708, and C707 to R720 is bypassed by Q703). Resultantly, ON time of Q701 is shortened and the energy stored in the primary winding is decreased, limiting the increase in the output voltage. When the output voltage begins to decrease, the light quantity of IC701 is decreased to lengthen the ON time to Q701. As a result the energy in the primary winding is increased to compensate for the decrease in the output voltage.
The negative feedback control is repeated to stabilize the output voltage.

(2) Noise Filter Circuit
The section of input filter, composed for a L-C filter element, reduces the level of noise given to A/C lines, in normal mode and in common mode.

(3) Rectifying/Smoothing Circuit
The input of A/C tension, is rectified for the diodes; D701, D702, D703, D704, and filtered, smoothed, for the capacitor C706. Giving the D/C tension necessary for the switching unit The power resistor R701 suppresses inrush current at power switch-on.

(4) Switching Circuit
This circuit employs the self excited ringing chocke convertor (RCC) system. In this system, the D/C voltage supplied from the rectifying & smoothing section is converted into high frequency pulses by ON/OFF repetition of mos-fet Q701.
Energy is charged in the primary winding of T701 during ON period of Q701, and discharged to the secondary winding during OFF period.
The output voltage is controlled by adjusting ON period of Q701 which changes time of C708 through operation of photo-coupler IC701 from 24 V. output.
The overcurrent protection is controlled by the transistor Q702 and for the present tension in state of ON, in the Source of Q701. When the present tension between R706 and the Source of Q701 overcomes the Base-Emiter switch tension of the transistor Q702, Q702 enters in ON state and short the tension of Gate of Q701, disabling it, therefore entering in state of protection.
The overvoltage protection is performed by operating the overcurrent protection circuit through destruction of zener diode D708 and short-circuiting of load. The protection of overvoltage is controlled by the zener diode D708, this diode, when have overvoltage in 24 v D/C output, overcomes the tension zener and have overcurrent between Catode and Anode. Next, pass to shortcircuit state, therefore entering to state of protection for overcurrent.

(5) 5V Circuit
The tension which supply a secondary of the transformer T701, after rectified by D712 and filtrate, Q708, stabilizing the tension to 5V. This circuit include the fuse resistor J6, will protect to the 5V line of short circuits after D712. In order to prevent damage in shortcircuit state, use the D721, which, short the Emiter tension of Q705, therefore, the power supply entering to stop state.

3.3. Overcurrent protection function

When the output current in the secondary side increases to become an overcurrent or short R706/R720 detects the drain current to turn on Q702. The gate voltage of Q701 is controlled to shorten ON time of Q701 to protect the circuit from the overcurrent.

3.4. Overvoltage protection function

When the output voltage is abnormally increased and D708 zener voltage exceeds about 27V, D708 is shorted to operate the same procedure as the overcurrent protection function. To reset, turn off the AC switch, remove the cause, and replace D708 with a new one.

3.5 Rush current limiting circuit

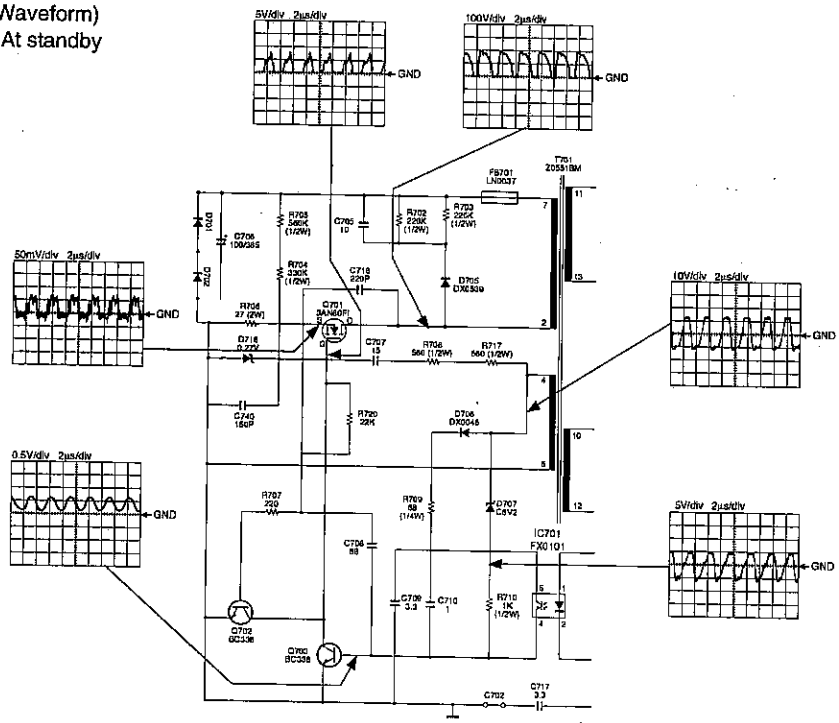
When AC power is supplied, a rush current flowing through capacitor C706 may blow fuse F701, 702 and damage the circuit. To prevent this, the power resistor R701 is provided to limit the rush current.

3.6. Line filter

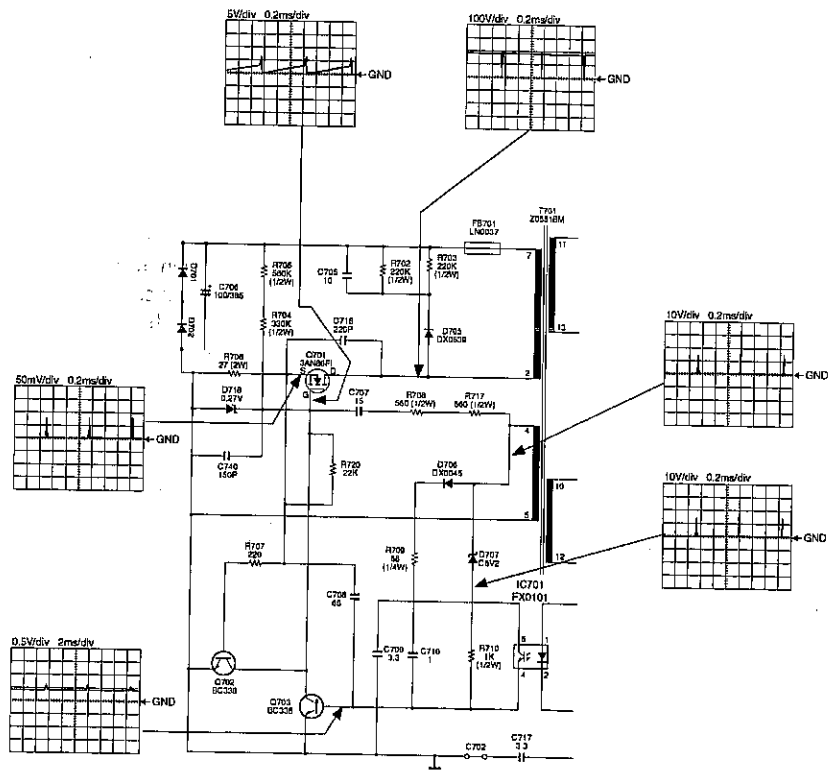
To protect against external noises and noises generated in the power circuit, the line filter is composed of L701, L702, L703, C702, C703, C704, and C746 to reduce noises.

(Waveform)

• At standby



• When the overcurrent protection circuit works



[5] Circuit description of CCD PWB

The CCD board picks up optical information from the document, converts it into an electrical (analog) signal and transfers it to the control boad.

(1) Block diagram

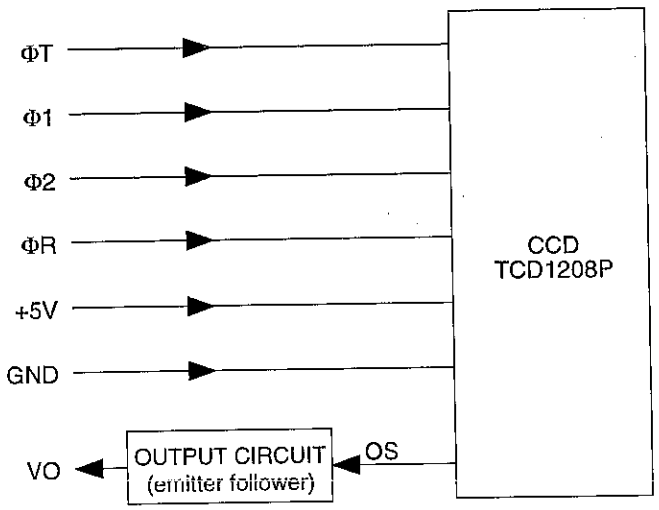


Fig. 8

(2) Description of blocks

1. CCD

The TCD1208P is a highly sensitive charged coupled image sensor that consists of 2160 picture elements.

Receiving four drive signal (ϕT, ϕ2, ϕ1, ϕR) from the control board, the tranferred photoelectric analog signal OS is impedance converted, and the signal VO, is supplied to the control board.

2. Waveforms

1. ϕ1, ϕ2 (=$\overline{\phi 1}$) signals within the control board

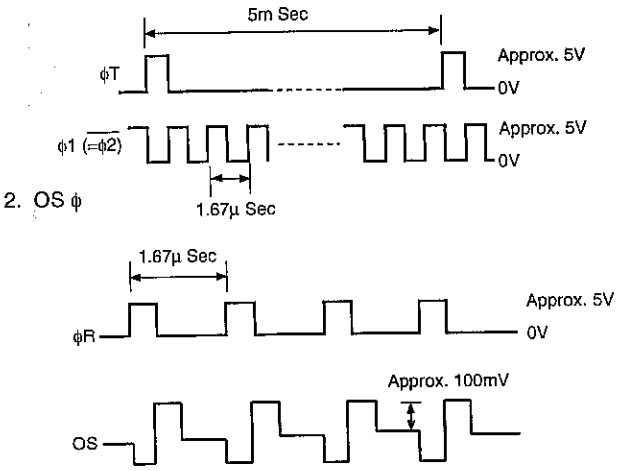
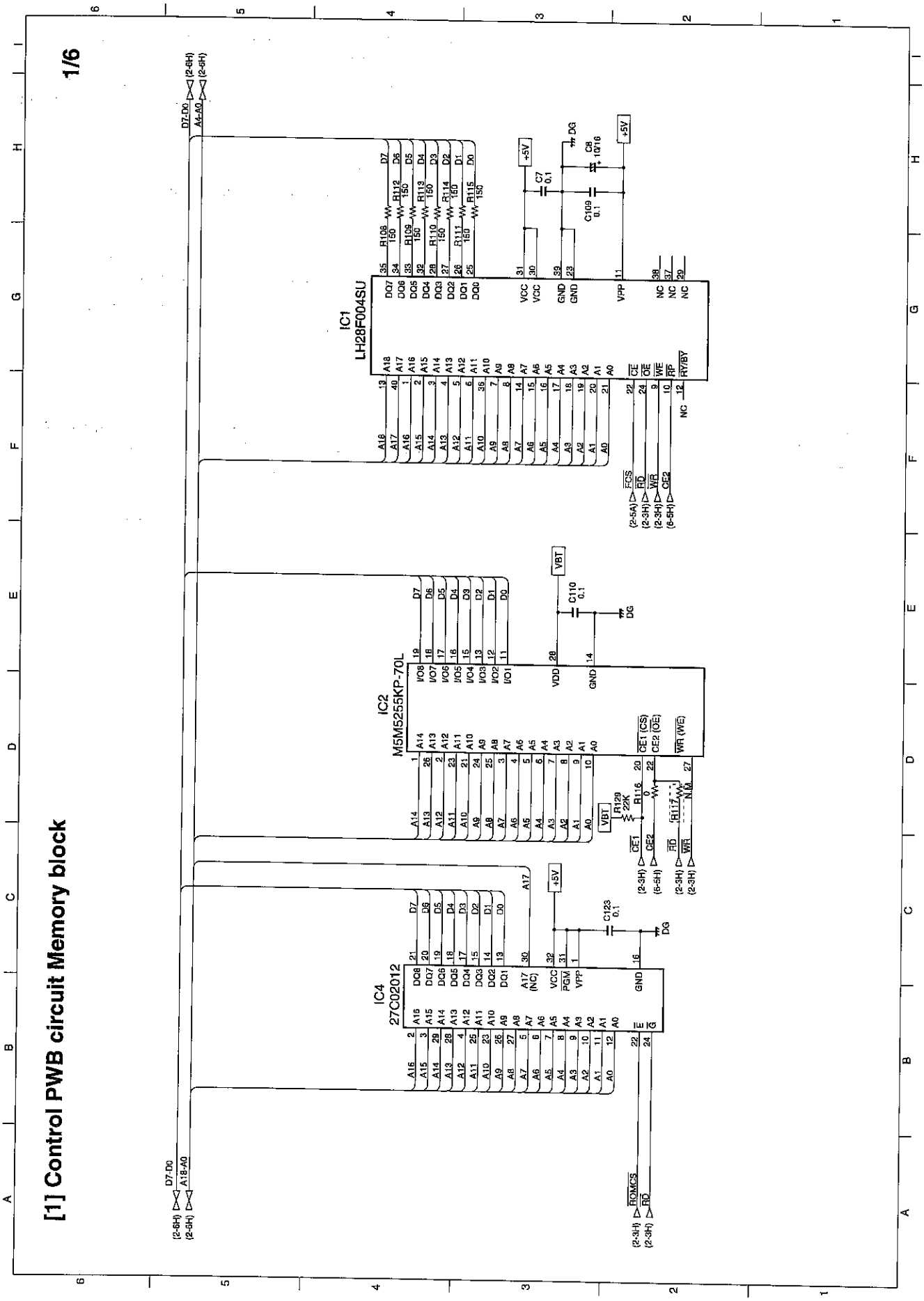
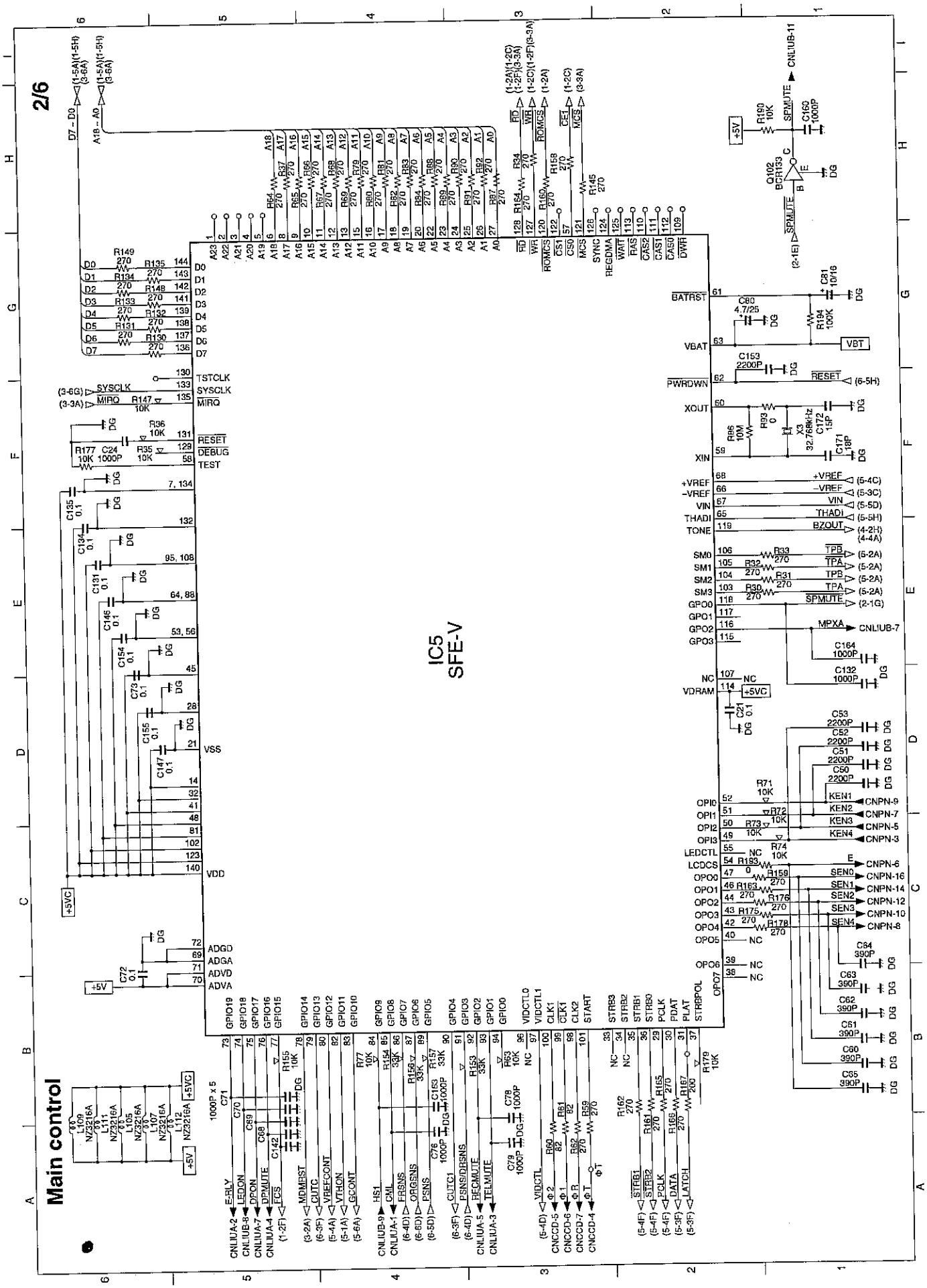


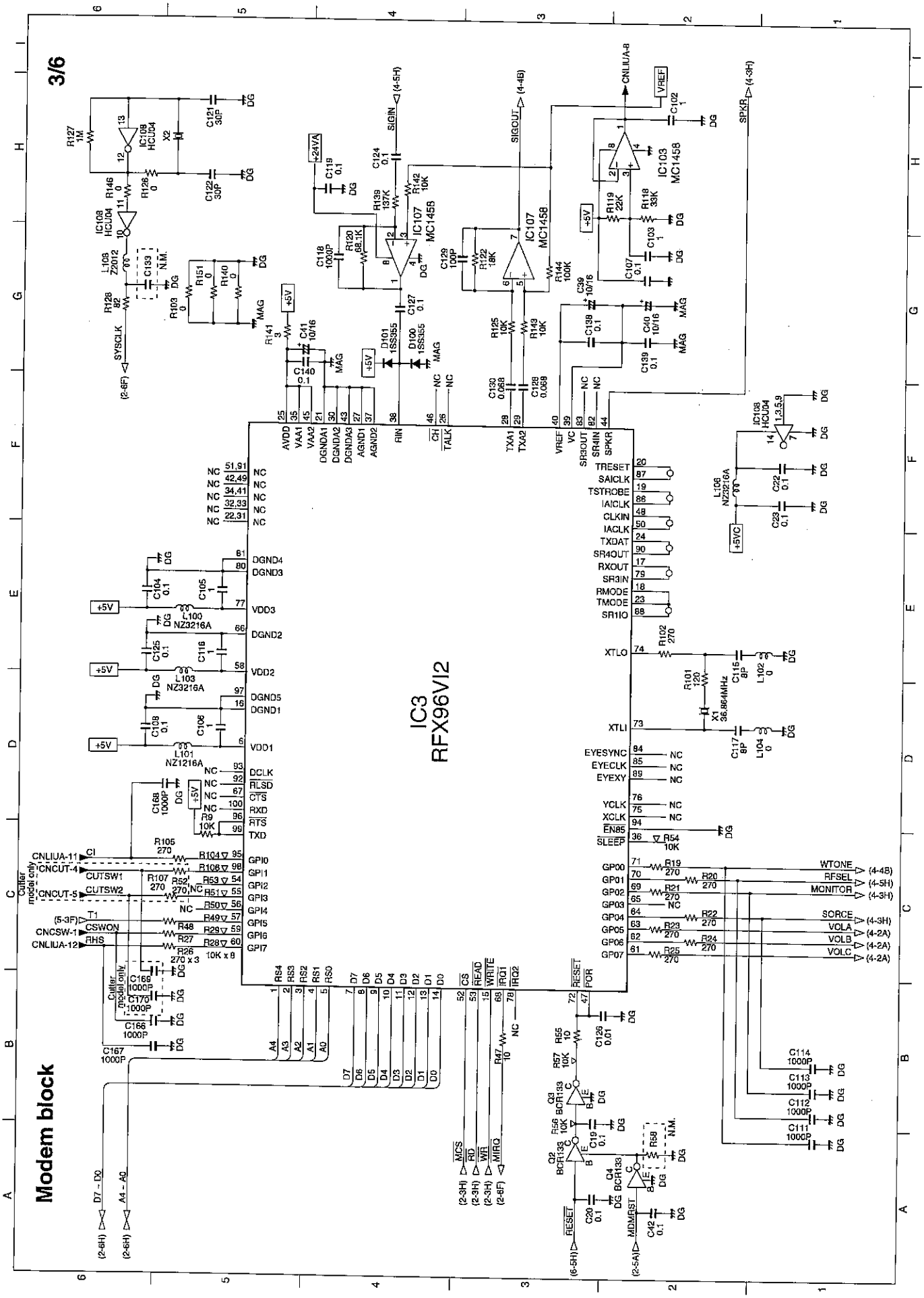
Fig. 9

CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

[1] Control PWB circuit Memory block

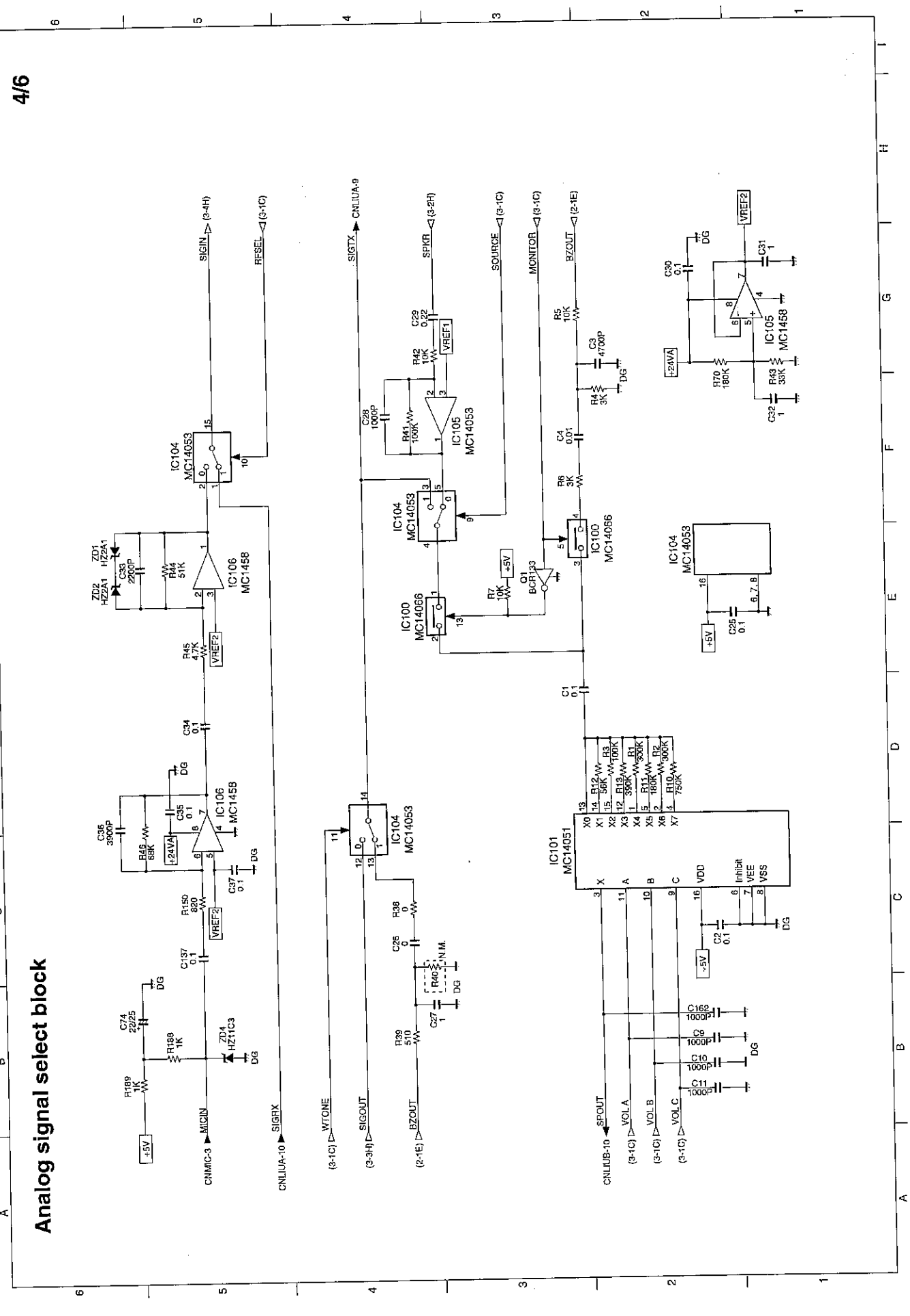


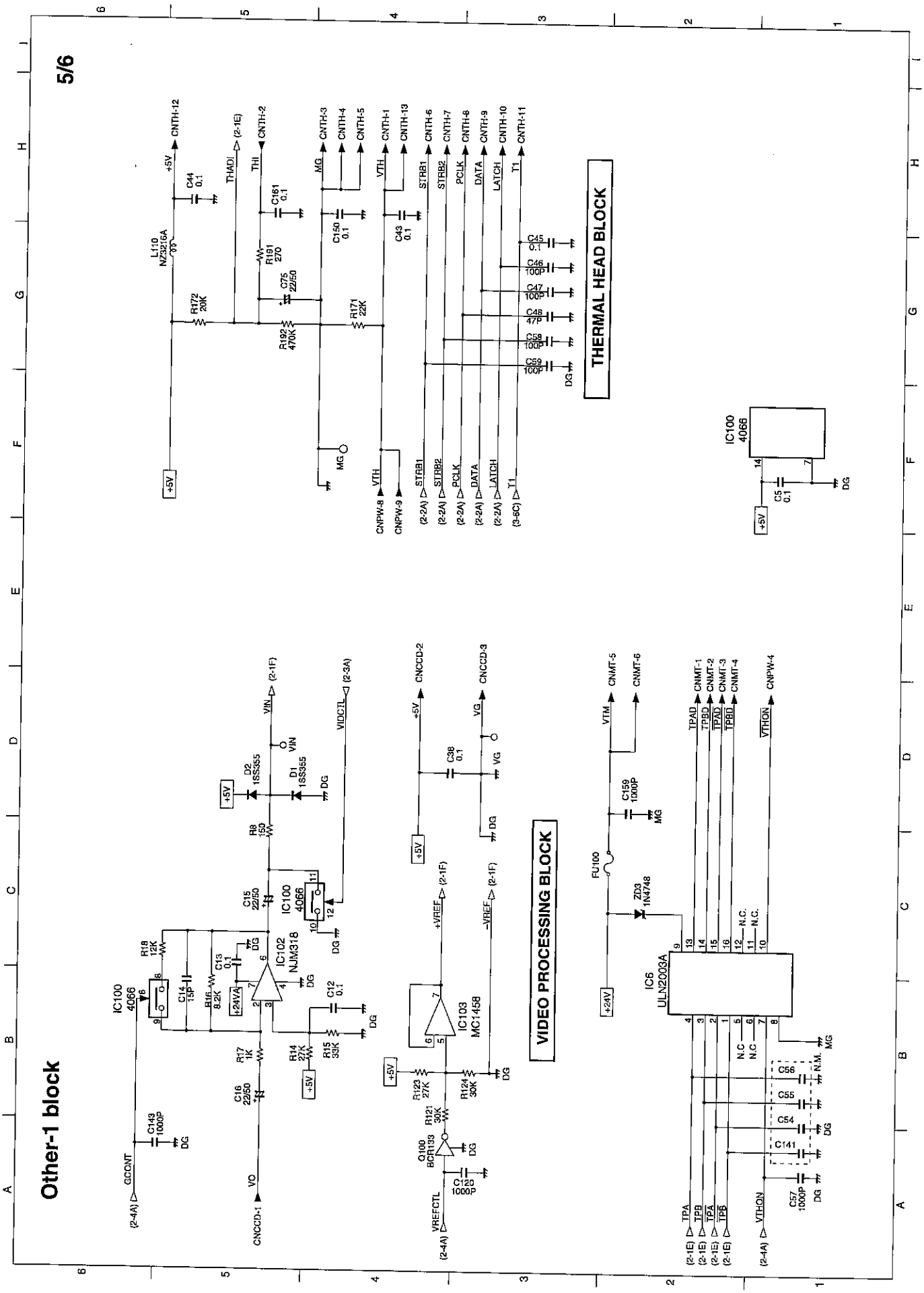

2/6
IC5
SFE-V
Main control

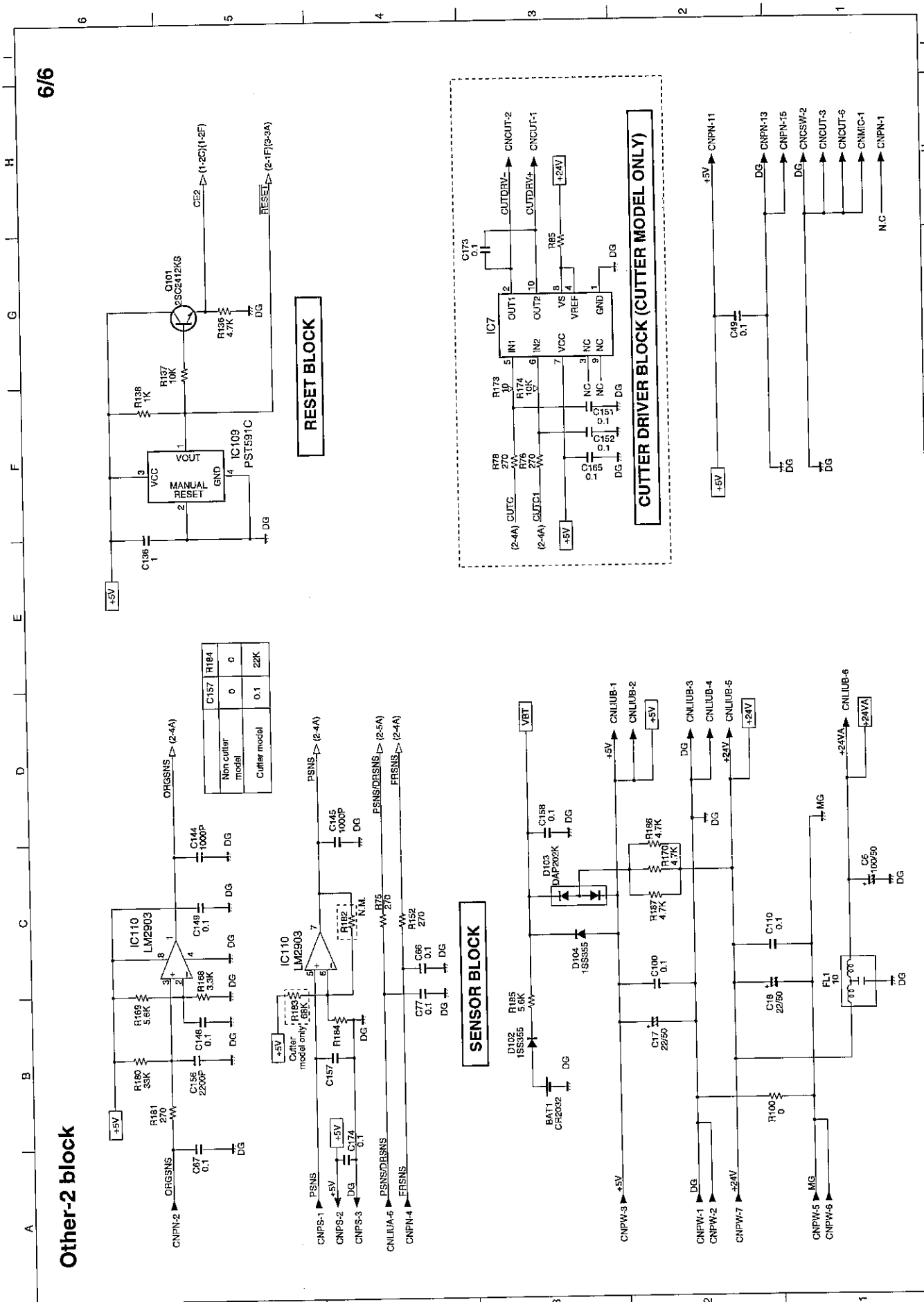

3/6
Modem block
IC3
RFX96VI2
AVDD
VAA1
VAA2
DGNDA1
DGNDA2
DGNDA3
AGND1
AGND2
RIN
TALK
TXA1
TXA2
VREF
VC
SR4OUT
SR4IN
SPKR
TRESET
SAICLK
TSTROBE
IAICLK
CLKIN
IACLK
TXDAT
SR4OUT
RXOUT
SR3IN
RMODE
TMODE
SR1IO
XTLO
XTLI
EYESYNC
EYECLK
EYEXY
YCLK
XCLK
EN85
SLEEP
DGND4
DGND3
VDD3
DGND2
VDD2
DGND5
DGND1
VDD1
DCLK
RLSD
CTS
RXD
RTS
TXD
GPI0
GPI1
GPI2
GPI3
GPI4
GPI5
GPI6
GPI7
GP00
GP01
GP02
GP03
GP04
GP05
GP06
GP07
CS
READ
WRITE
IRQ1
IRQ2
RESET
POR
WTONE
RFSEL
MONITOR
SORCE
VOLA
VOLB
VOLC
CNLIUA-11
CNCUT-4
CNCUT-5
CNCSW-1
CNLIUA-12
CUTSW1
CUTSW2
Cutter model only
SYSCLK
MAG
SIGIN
SIGOUT
CNLIUA-8
SPKR
MCS
RD
WR
MIRQ
MDMRST
D7 - D0
A4 - A0

Analog signal select block

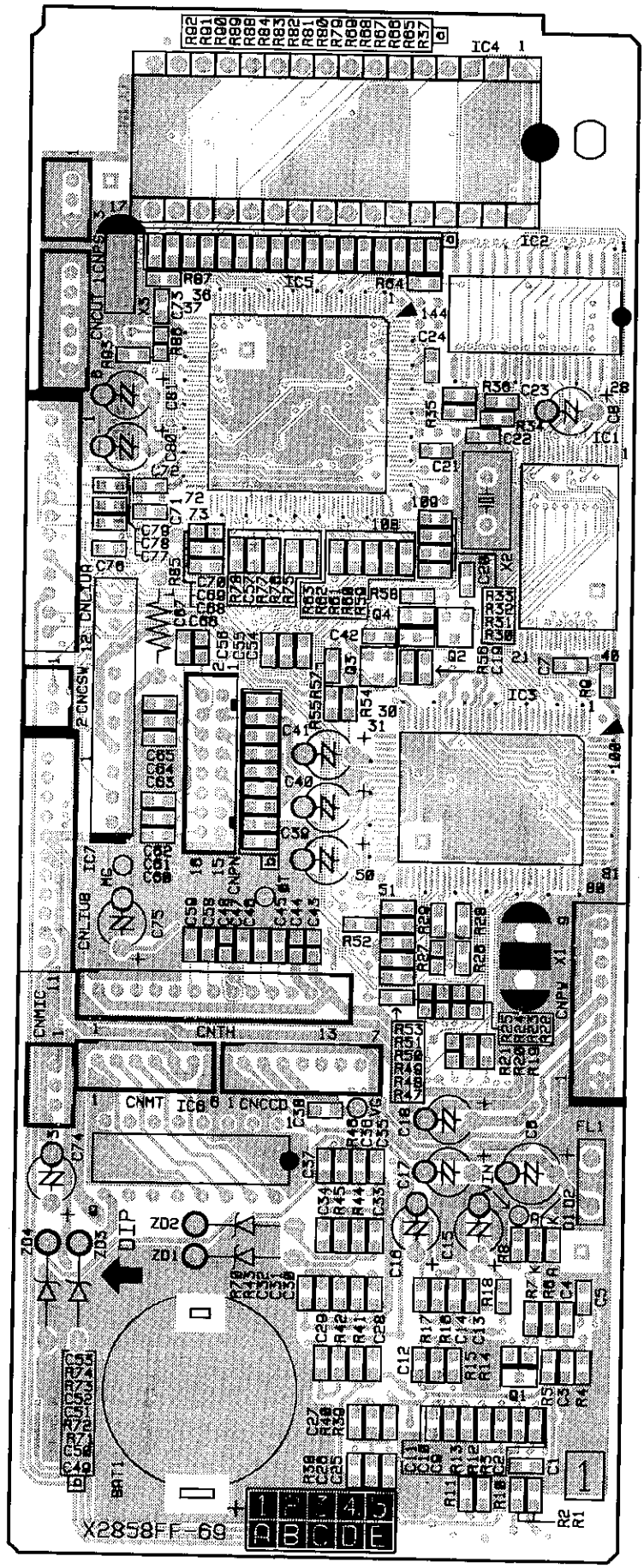
4/6



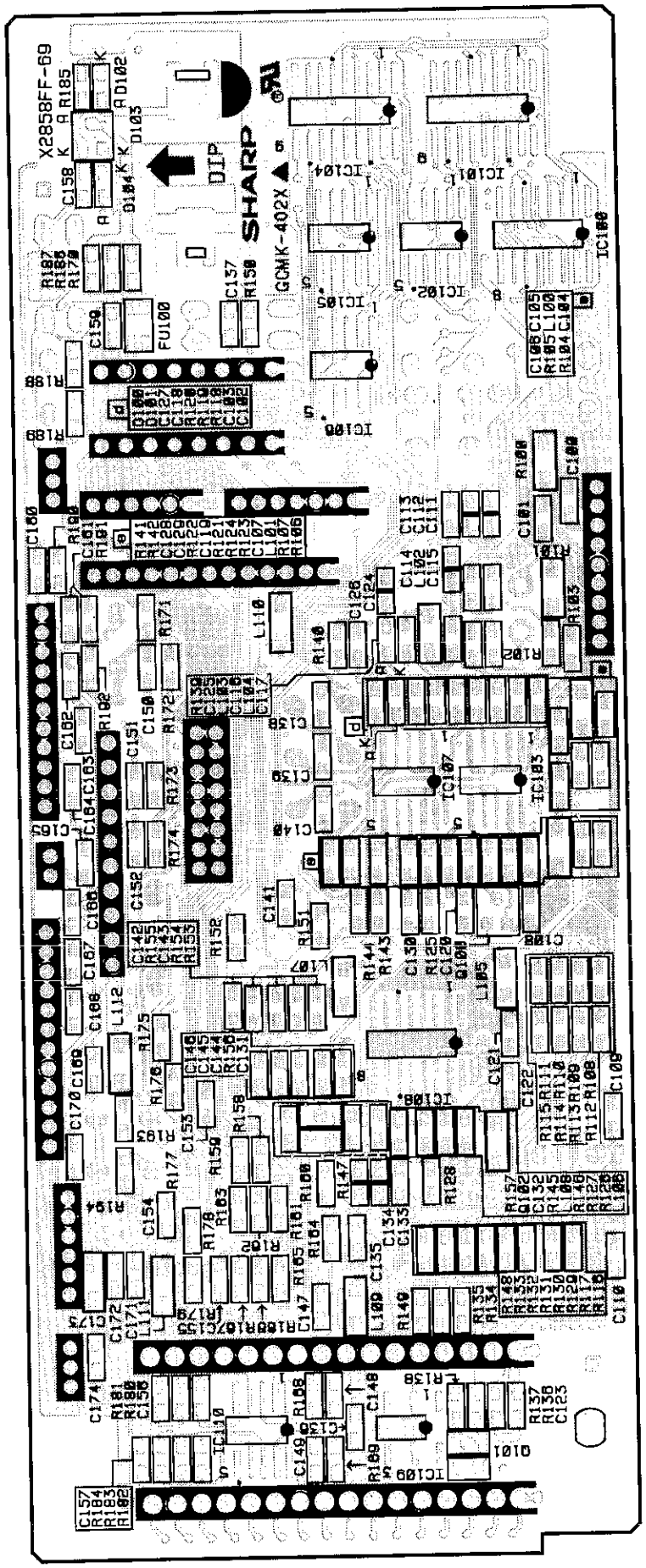

5/6
Other-1 block
THERMAL HEAD BLOCK
VIDEO PROCESSING BLOCK
IC100 4066
IC102 NJM318
IC103 MC1458
IC6 ULN2003A
D1 1SS355
D2 1SS355
ZD3 1N4748
Q100 BCR133
FU100
L110 NZ3216A
+5V
+24V
+24VA
DG
MG
VG
VIN
VTH
VTM
VTHON
VREFCTL
CCONT
VO
CNCCD-1
CNCCD-2
CNCCD-3
CNPW-8
CNPW-9
CNPW-4
CNTH-1
CNTH-2
CNTH-3
CNTH-4
CNTH-5
CNTH-6
CNTH-7
CNTH-8
CNTH-9
CNTH-10
CNTH-11
CNTH-12
CNTH-13
CNMT-1
CNMT-2
CNMT-3
CNMT-4
CNMT-5
CNMT-6
STRB1
STRB2
PCLK
DATA
LATCH
T1
THADJ
THI
VIDCTL
+VREF
-VREF
TPAD
TPBD
TPA
TPB
N.C.
N.M.
R8 150
R15 33K
R17 1K
R18 12K
R34 27K
R43 22K
R46 20K
R121 30K
R123 27K
R124 30K
R171 22K
R172 20K
R191 270
R192 470K
C5 0.1
C12 0.1
C13 0.1
C14 15P
C15 2200
C16 2200
C38 0.1
C43 0.1
C44 0.1
C45 0.1
C46 100P
C47 100P
C48 47P
C58 100P
C59 100P
C75 22/50
C120 1000P
C141
C149 1000P
C150 0.1
C159 1000P
C161 0.1
C54
C55
C56
C57 1000P
(2-1E)
(2-1F)
(2-2A)
(2-3A)
(2-4A)
(2-4A)
(3-6C)

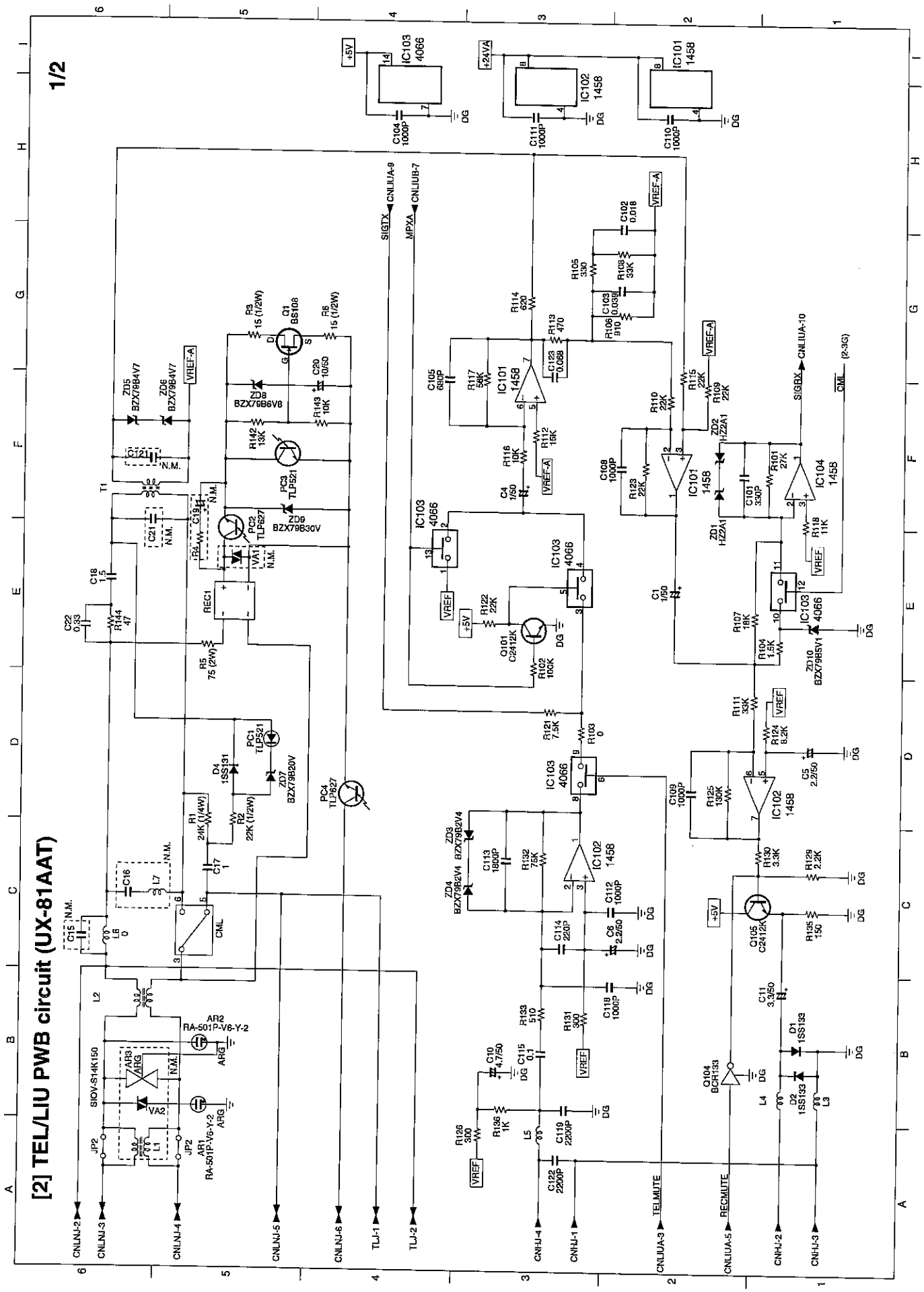

6/6
Other-2 block
RESET BLOCK
SENSOR BLOCK
CUTTER DRIVER BLOCK (CUTTER MODEL ONLY)
IC109 PST591C
IC110 LM2903
IC7
Q101 2SC2412KS
BAT1 CR2032
Non cutter model
Cutter model
C157 0
R184 0
C157 0.1
R184 22K
CE2
RESET
CNPN-1
CNPN-2
CNPN-11
CNPN-13
CNPN-15
CNGSW-2
CNCUT-3
CNCUT-6
CNMIC-1
N.C
CNPS-1
CNPS-2
CNPS-3
CNLIUA-5
CNPN-4
CNPW-1
CNPW-2
CNPW-3
CNPW-5
CNPW-6
CNPW-7
CNLIUB-1
CNLIUB-2
CNLIUB-3
CNLIUB-4
CNLIUB-5
CNLIUB-6
CNCUT-1
CNCUT-2
CUTDRV-
CUTDRV+
CUTC
CUTC1
ORGSNS
PSNS
PSNS/ORGSNS
FRSNS
VBT
+5V
+24V
+24VA
DG
MG

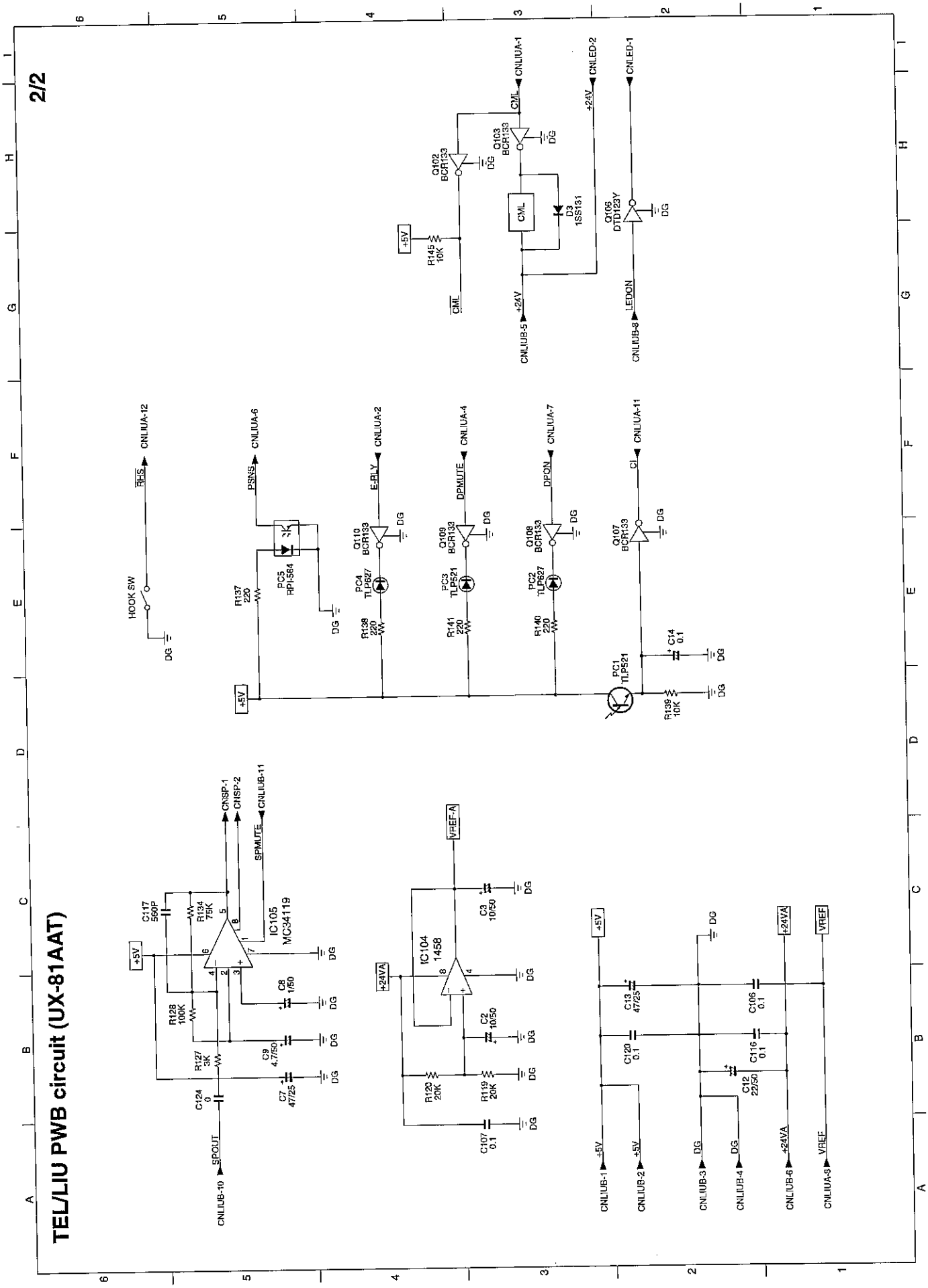
Control PWB parts layout (Top side)



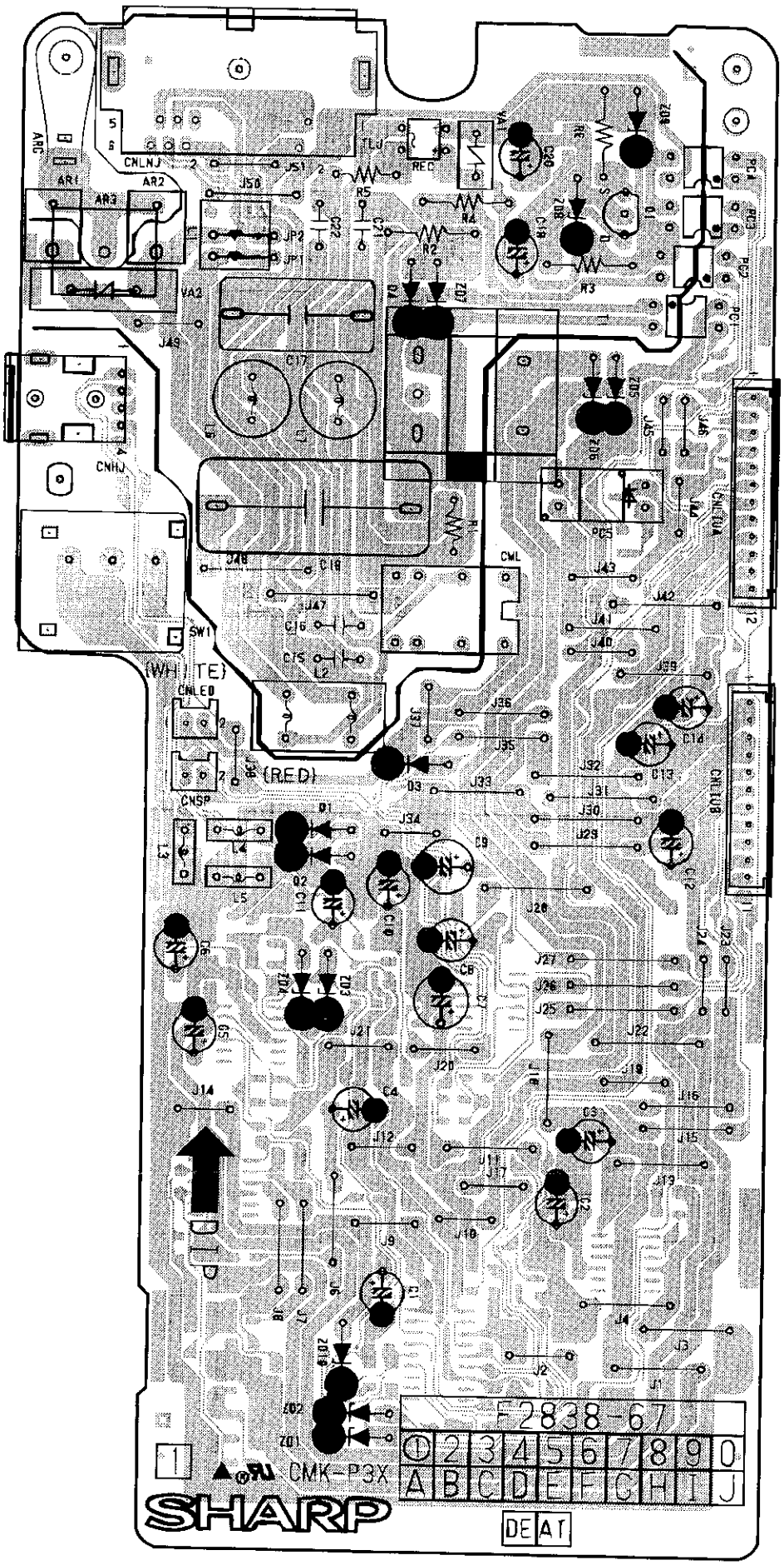
Control PWB parts layout (Bottom side)



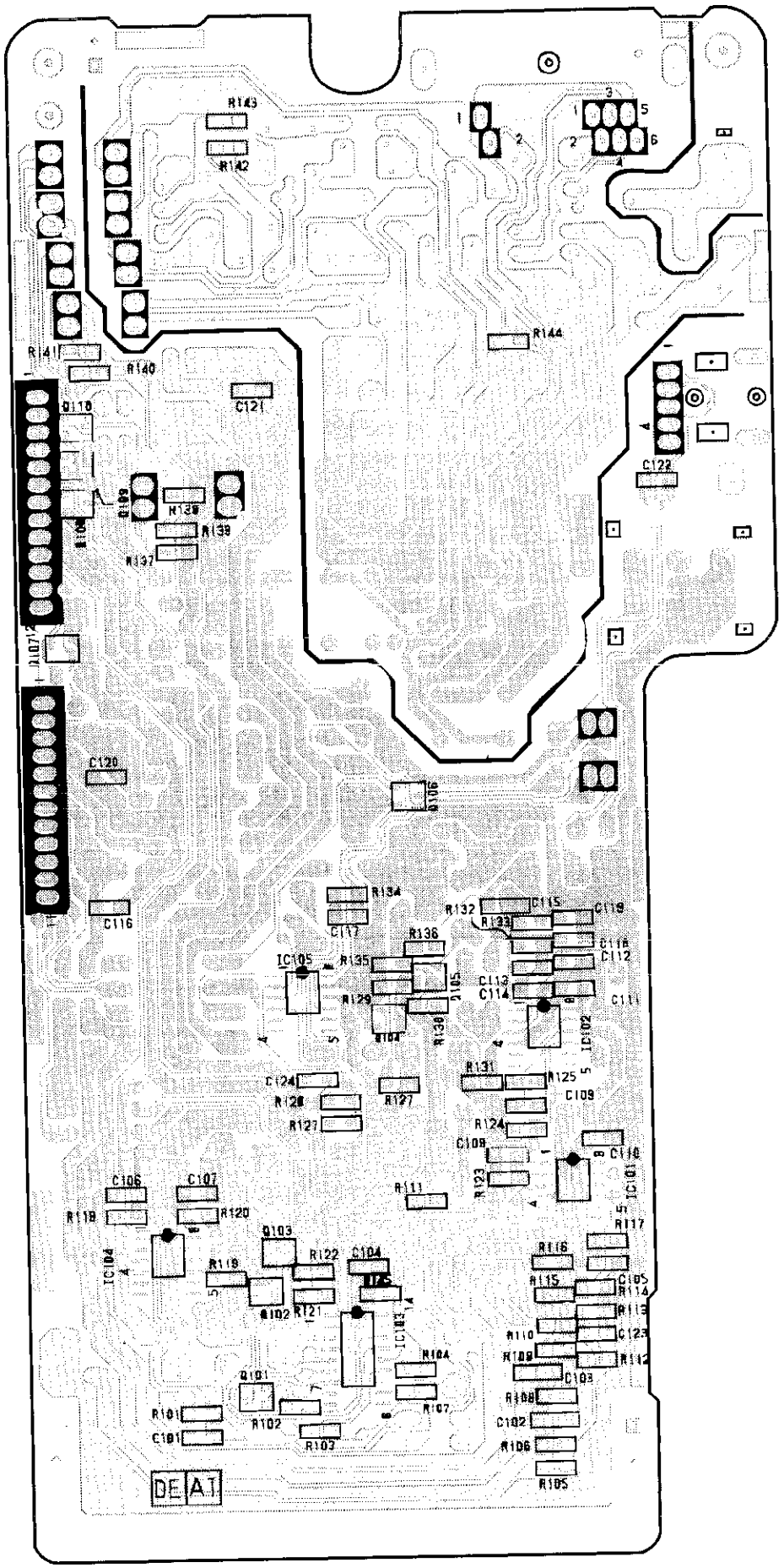

[2] TEL/LIU PWB circuit (UX-81AAT)
1/2

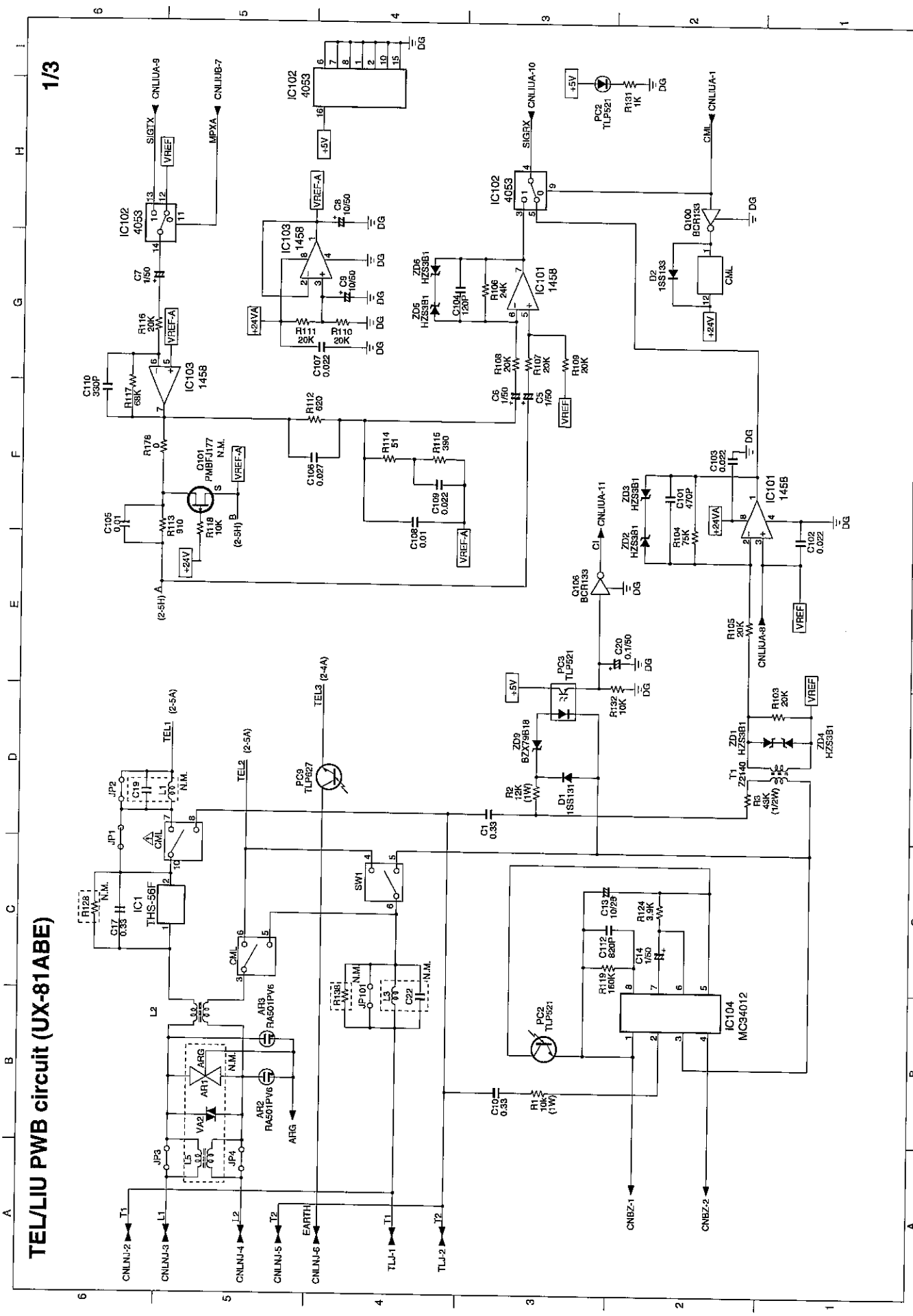

TEL/LIU PWB circuit (UX-81AAT)
2/2
CNLIUA-12
RHS
HOOK SW
DG
CNLIUA-6
PSNS
R137 220
PC5 RPI-564
3K
DG
CNLIUA-2
E-RLY
Q110 BCR133
PC4 TLP627
R138 220
CNLIUA-4
DPMUTE
Q109 BCR133
PC3 TLP521
R141 220
CNLIUA-7
DPON
Q108 BCR133
PC2 TLP627
R140 220
CNLIUA-11
CI
Q107 BCR133
PC1 TLP521
C14 0.1
R139 10K
+5V
CNLIUA-1
CML
Q103 BCR133
Q102 BCR133
R145 10K
CML
D3 1SS131
CNLIUB-5
+24V
CNLED-2
+24V
CNLED-1
Q106 DTD123Y
CNLIUB-8
LEDON
CNSP-1
CNSP-2
SPMUTE
CNLIUB-11
IC105 MC34119
C117 560P
R134 75K
R128 100K
R127 3K
C124 0
C8 1/50
C9 4.7/50
C7 47/25
CNLIUB-10
SPOUT
VREF-A
IC104 1458
C3 10/50
C2 10/50
R120 20K
R119 20K
C107 0.1
+24VA
C13 47/25
C120 0.1
C106 0.1
C116 0.1
C12 22/50
CNLIUB-1
CNLIUB-2
CNLIUB-3
CNLIUB-4
CNLIUB-6
CNLIUA-5
VREF

TEL/LIU PWB parts layout (Top side) (UX-81AAT)



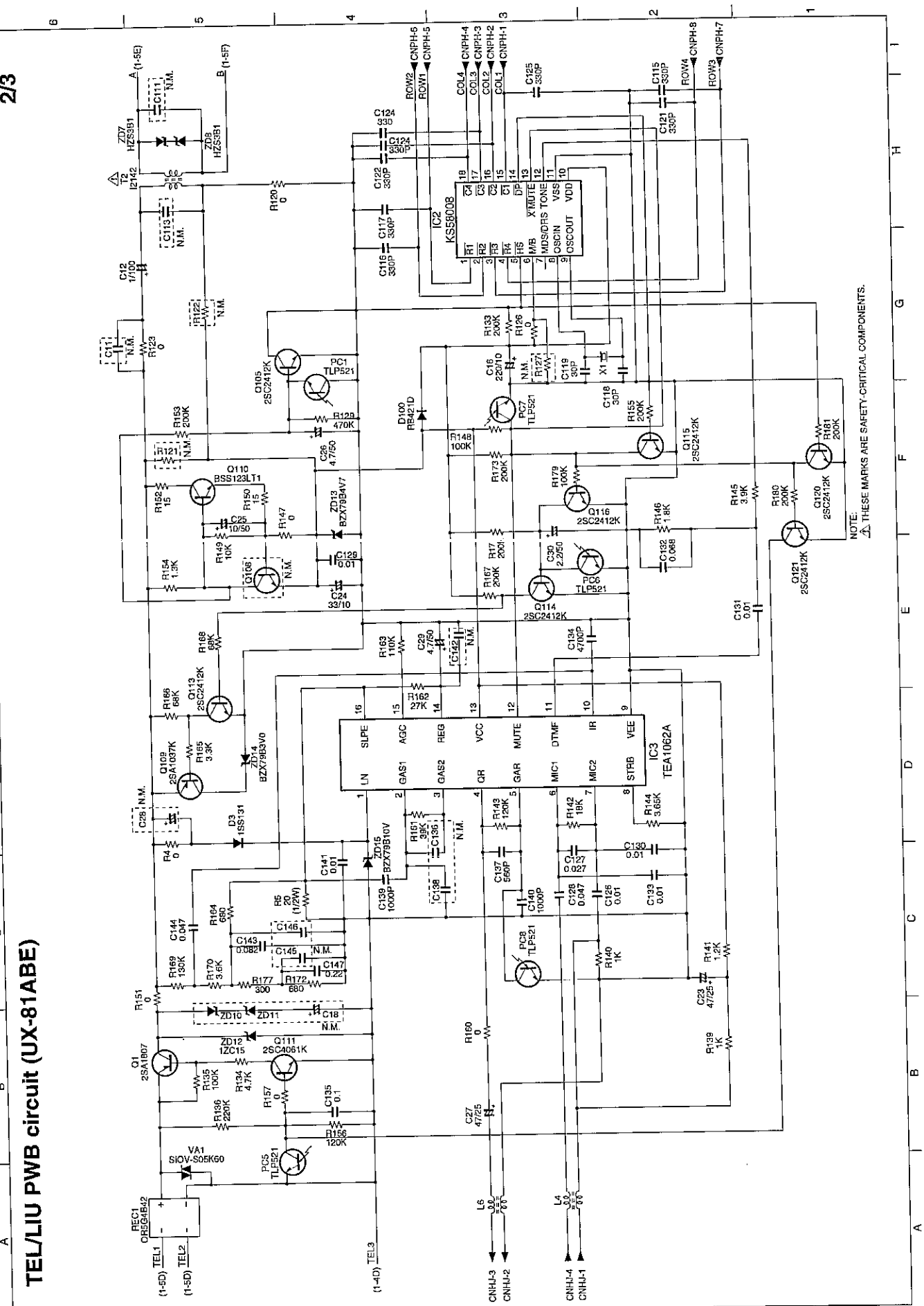
TEL/LIU PWB parts layout (Bottom side) (UX-81AAT)

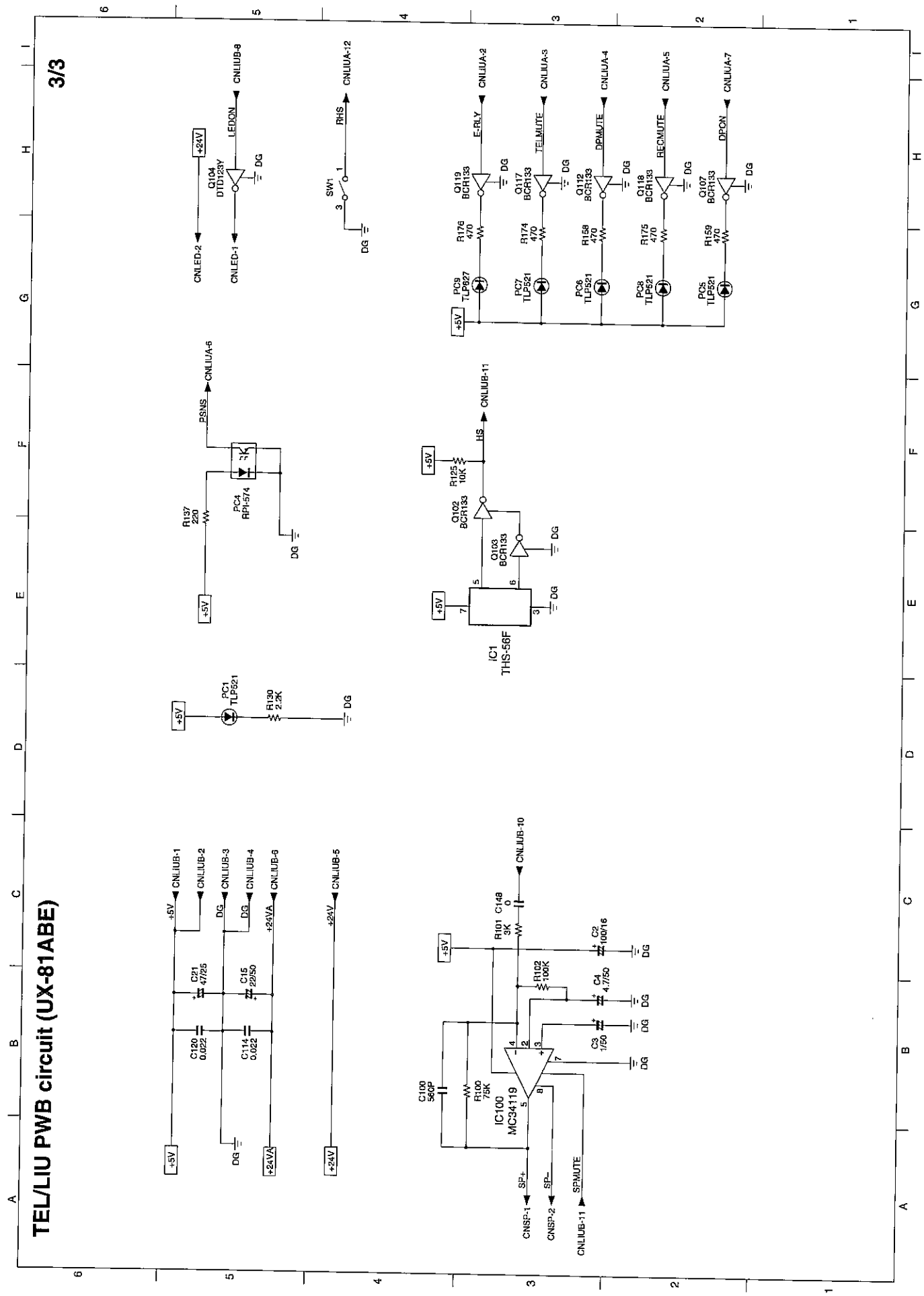



TEL/LIU PWB circuit (UX-81ABE)
1/3
IC1 THS-56F
IC101 1458
IC102 4053
IC103 1458
IC104 MC34012
Q100 BCR133
Q101 PMBFJ177
Q106 BCR133
PC1 TLP627
PC2 TLP521
PC3 TLP521
ZD1 HZS3B1
ZD2 HZS3B1
ZD3 HZS3B1
ZD4 HZS3B1
ZD5 HZS3B1
ZD6 HZS3B1
ZD9 BZX79B18
D1 1SS131
D2 1SS133
T1 Z2140
AR1 ARG
AR2 RA501PV6
AR3 RA501PV6
VA2
SW1
CNLIUA-1
CNLIUA-8
CNLIUA-9
CNLIUA-10
CNLIUA-11
CNLIUB-7
CNLNJ-2
CNLNJ-3
CNLNJ-4
CNLNJ-5
CNLNJ-6
CNBZ-1
CNBZ-2
TLJ-1
TLJ-2
SIGTX
SIGRX
MPXA
CML
VREF
VREF-A
+5V
+24V
+24VA
DG
EARTH
TEL1 (2-5A)
TEL2 (2-5A)
TEL3 (2-4A)
(2-5H)
(2-5H)
N.M.

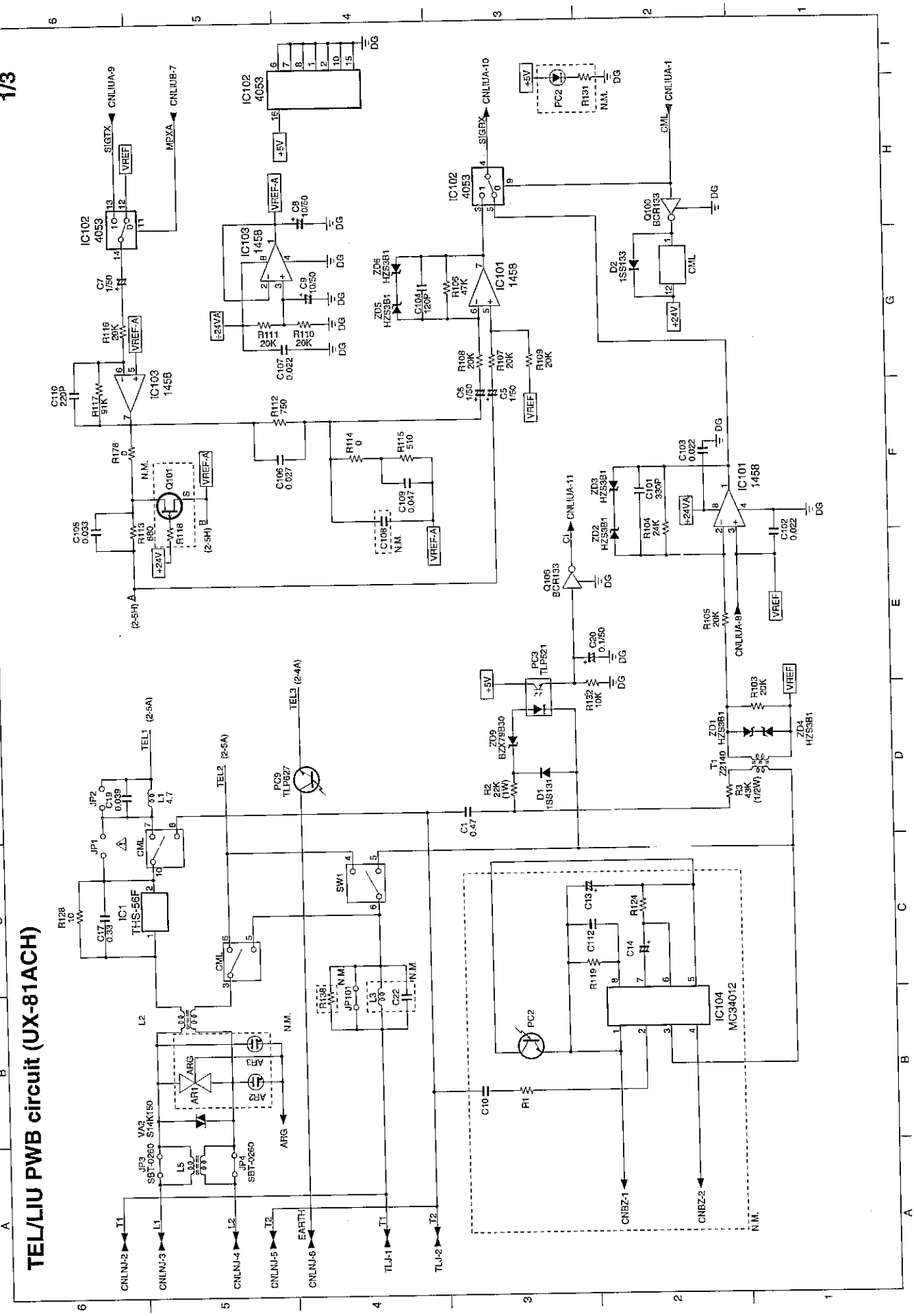
TEL/LIU PWB circuit (UX-81ABE)

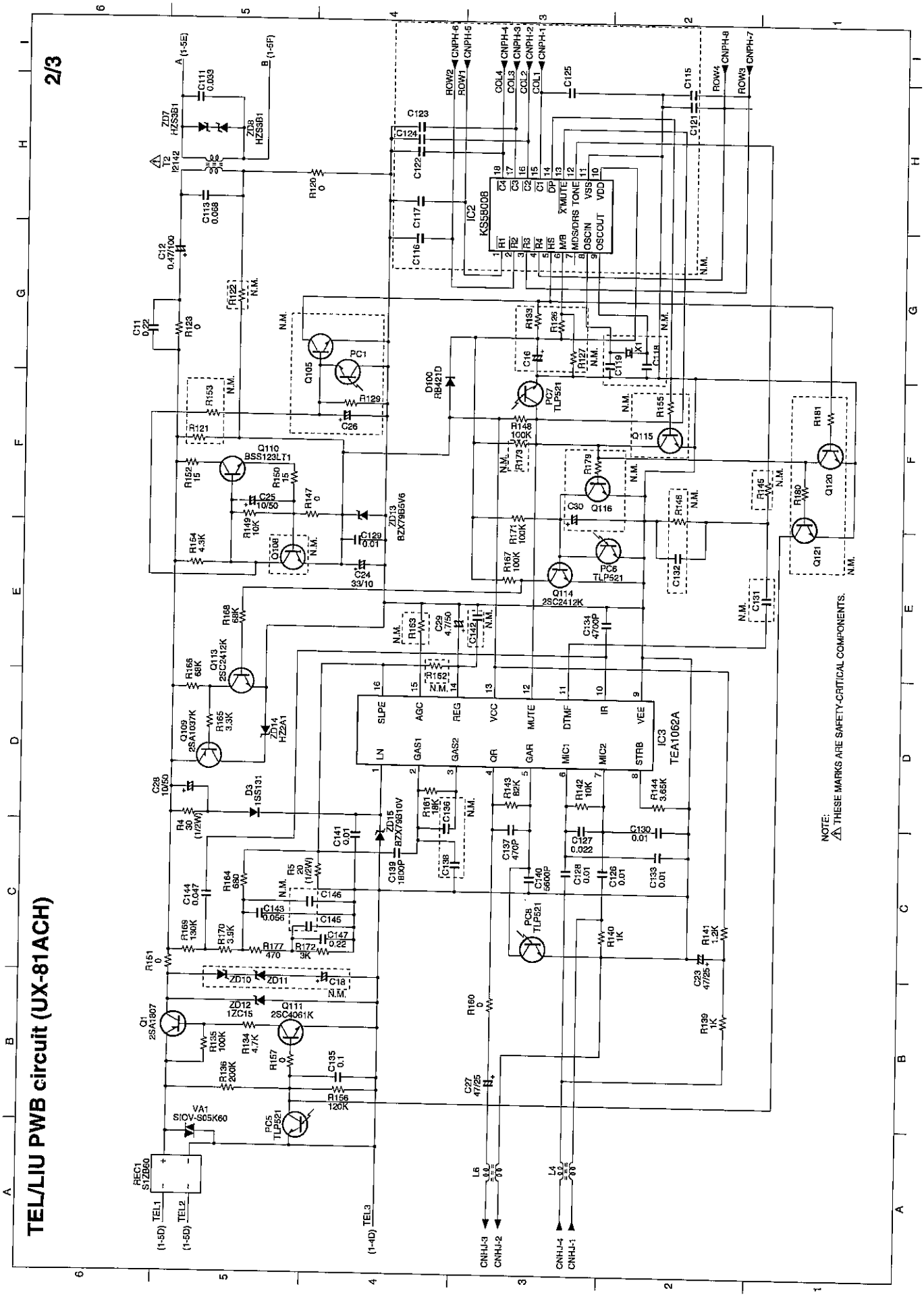
2/3




TEL/LIU PWB circuit (UX-81ABE)
3/3
CNLIUB-8
LEDON
+24V
Q104 DTD123Y
DG
CNLED-2
CNLED-1
SW1
RHS
CNLIUA-12
CNLIUA-2
E-RLY
TELMUTE
DPMUTE
RECMUTE
DPON
CNLIUA-3
CNLIUA-4
CNLIUA-5
CNLIUA-7
Q119 BCR133
Q117 BCR133
Q112 BCR133
Q118 BCR133
Q107 BCR133
R176 470
R174 470
R158 470
R175 470
R159 470
PC9 TLP627
PC7 TLP521
PC6 TLP521
PC8 TLP521
PC5 TLP521
+5V
PSNS
CNLIUA-6
R137 220
PC4 APH-574
PC1 TLP521
R130 2.2K
CNLIUB-11
HS
R125 10K
Q102 BCR133
Q103 BCR133
IC1 THS-56F
CNLIUB-1
CNLIUB-2
CNLIUB-3
CNLIUB-4
CNLIUB-6
CNLIUB-5
+24VA
+24V
C21 47/25
C15 22/50
C120 0.022
C114 0.022
CNLIUB-10
R101 3K
C148 0
C2 100/16
R102 100K
C4 4.7/50
C3 1/50
C100 560P
R100 75K
IC100 MC34119
SP+
SP-
SPMUTE
CNSP-1
CNSP-2
CNLIUB-11

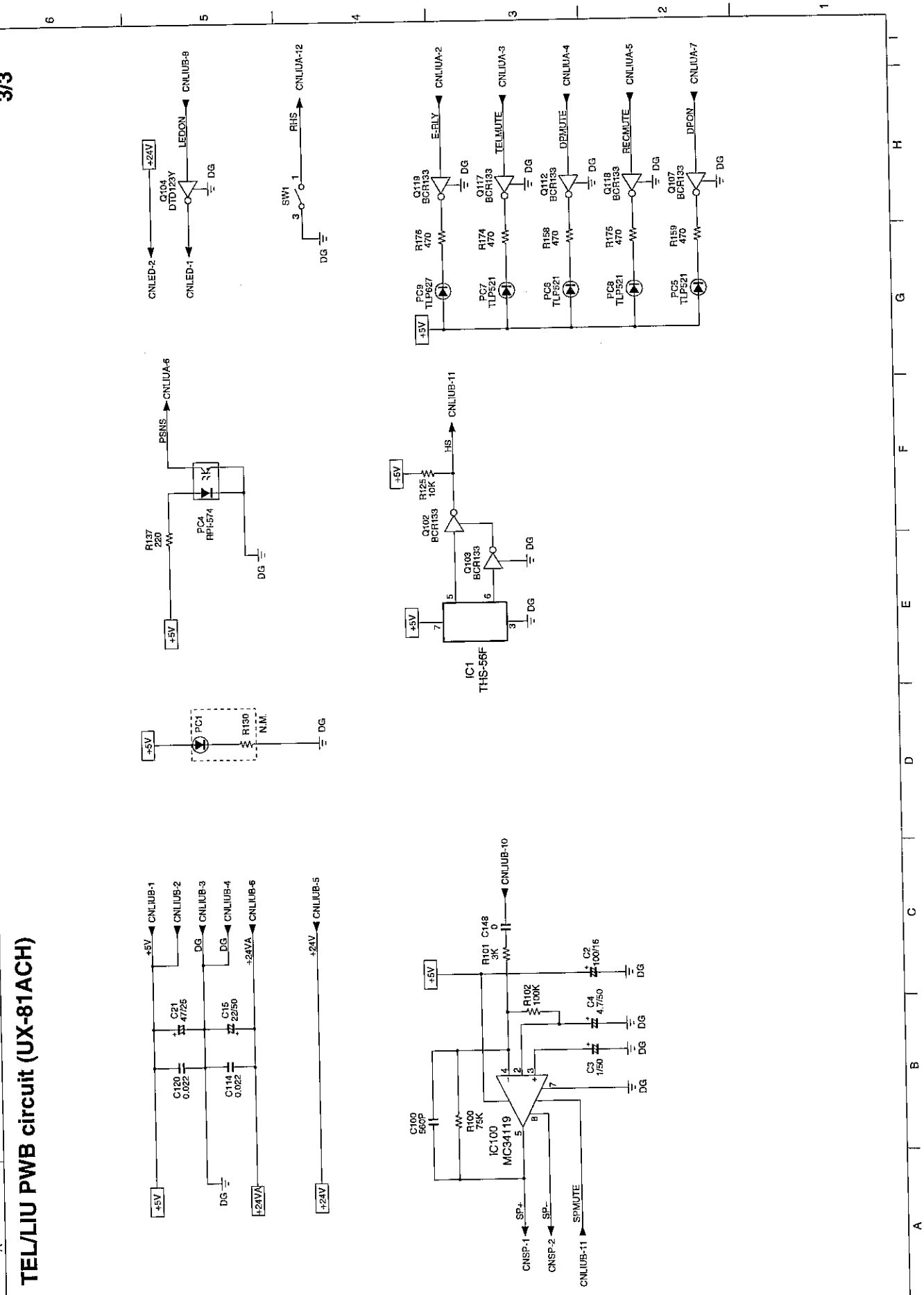
TEL/LIU PWB circuit (UX-81ACH)

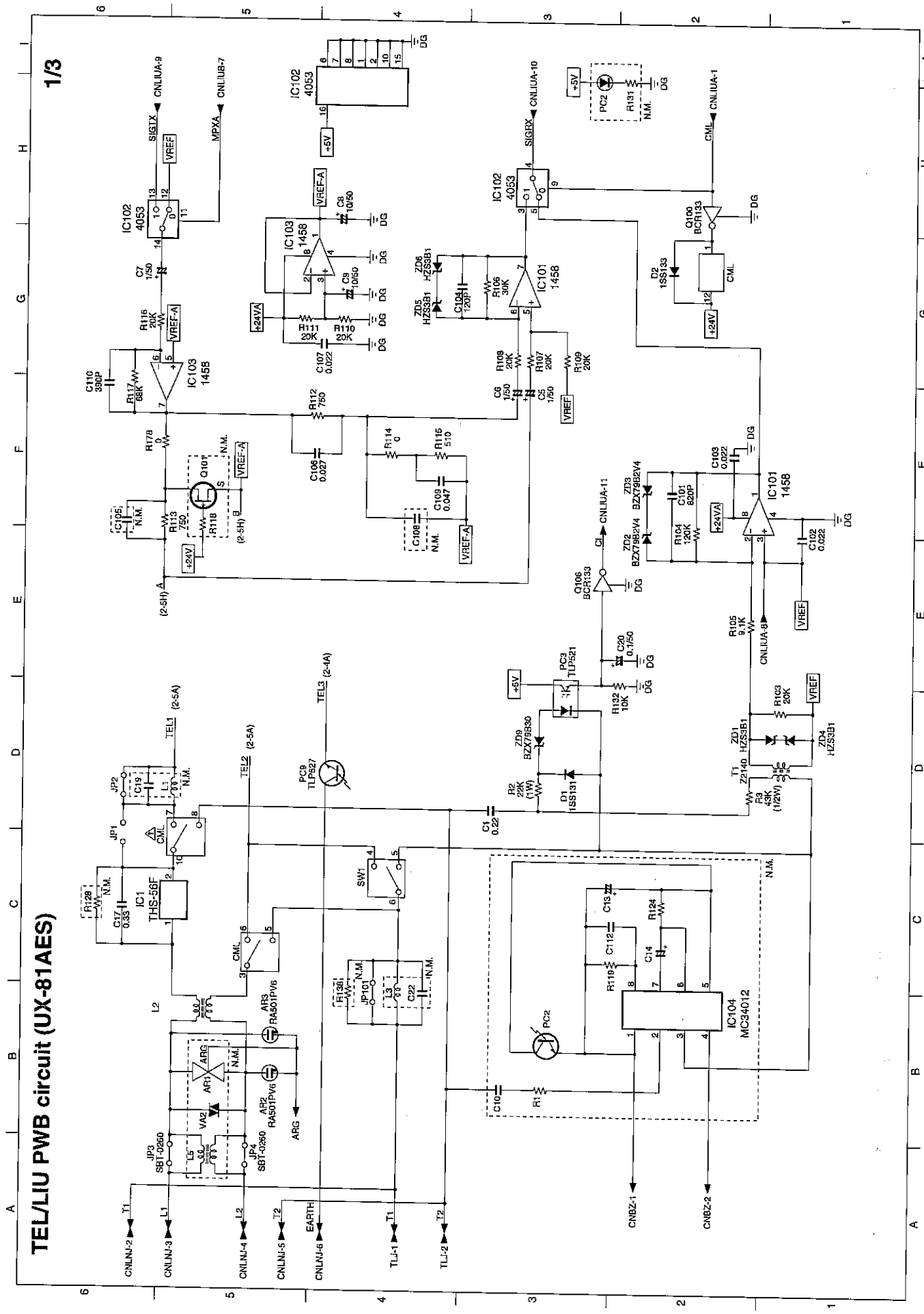



TEL/LIU PWB circuit (UX-81ACH)
2/3
IC2 KSS8008
IC3 TEA1062A
Q110 BSS123LT1
Q111 2SC4061K
Q113 2SC2412K
Q114 2SC2412K
Q109 2SA1037K
Q1 2SA1807
PC1
PC5 TLP521
PC6 TLP521
PC7 TLP521
REC1 S1ZB60
VA1 SIOV-S05K60
D100 RB421D
D3 1SS131
ZD7 HZS3B1
ZD8 HZS3B1
ZD10
ZD11
ZD12 1ZC15
ZD13 BZX79B5V6
ZD14 HZ2A1
ZD15 BZX79B10V
T2 I2142
NOTE:
⚠ THESE MARKS ARE SAFETY-CRITICAL COMPONENTS.
TEL1
TEL2
TEL3
CNHJ-1
CNHJ-2
CNHJ-3
CNHJ-4
CNHJ-5
CNHJ-6
CNPH-1
CNPH-2
CNPH-3
CNPH-4
CNPH-5
CNPH-6
CNPH-7
CNPH-8

TEL/LIU PWB circuit (UX-81ACH)

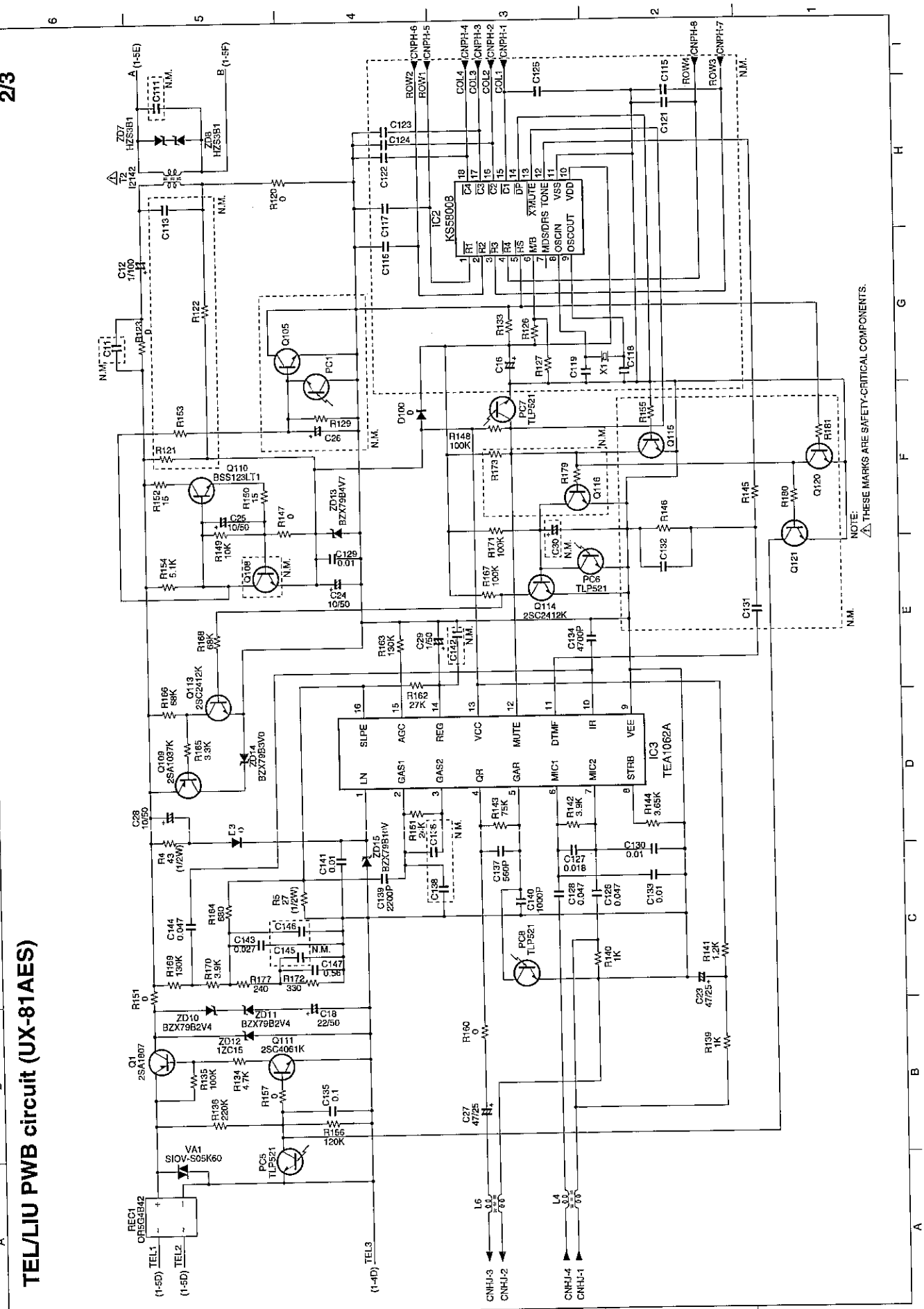
3/3

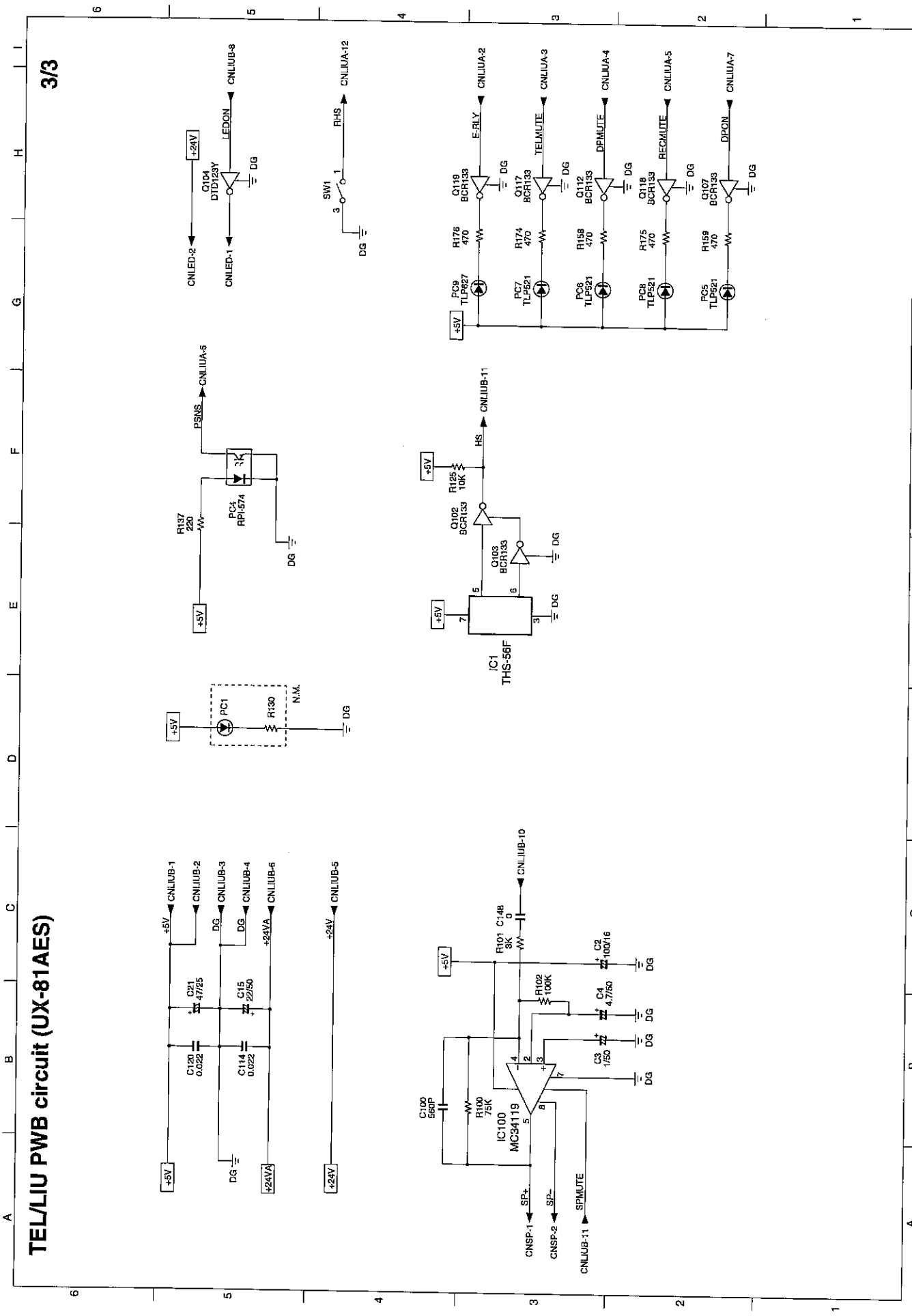


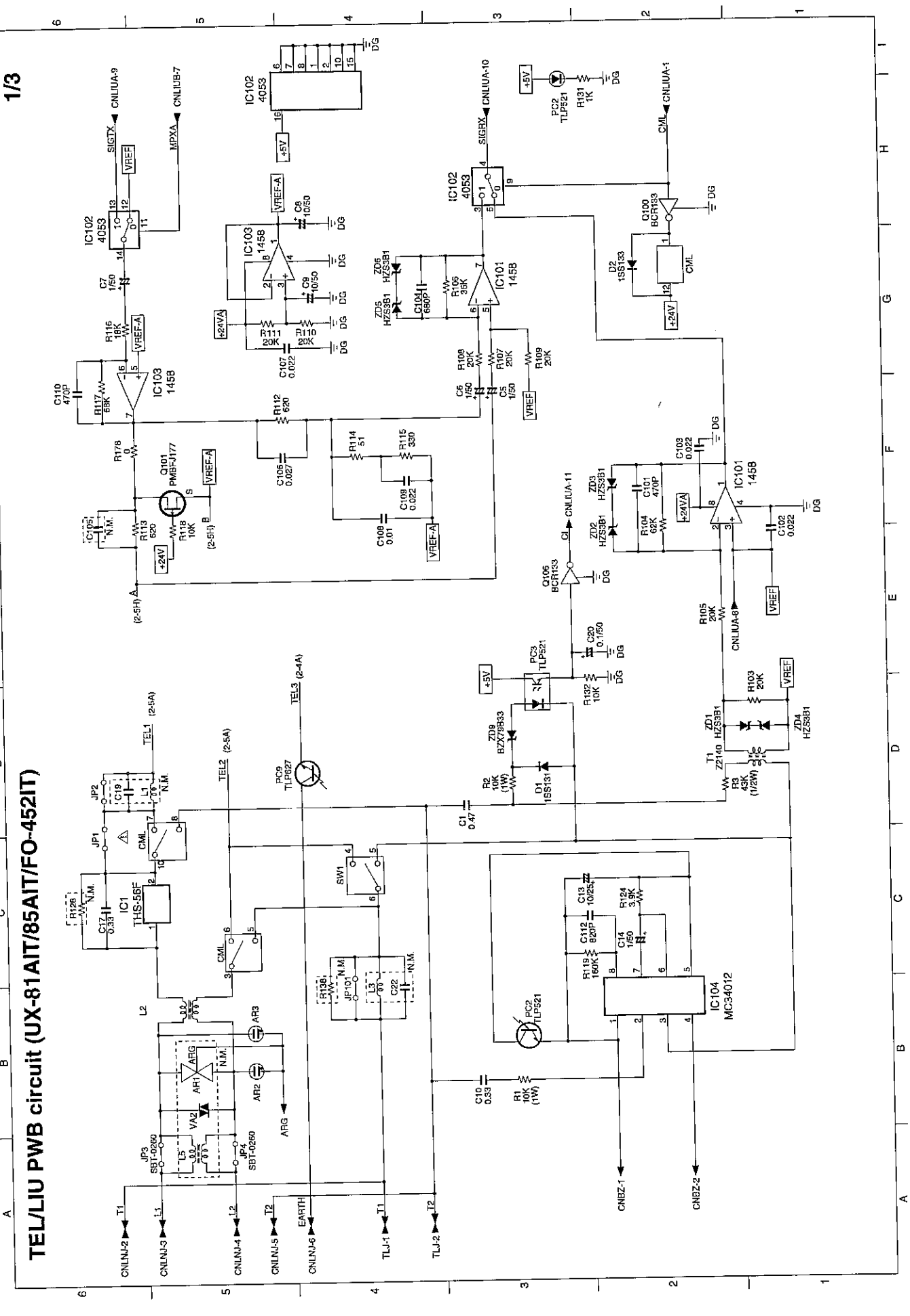

TEL/LIU PWB circuit (UX-81AES)
1/3

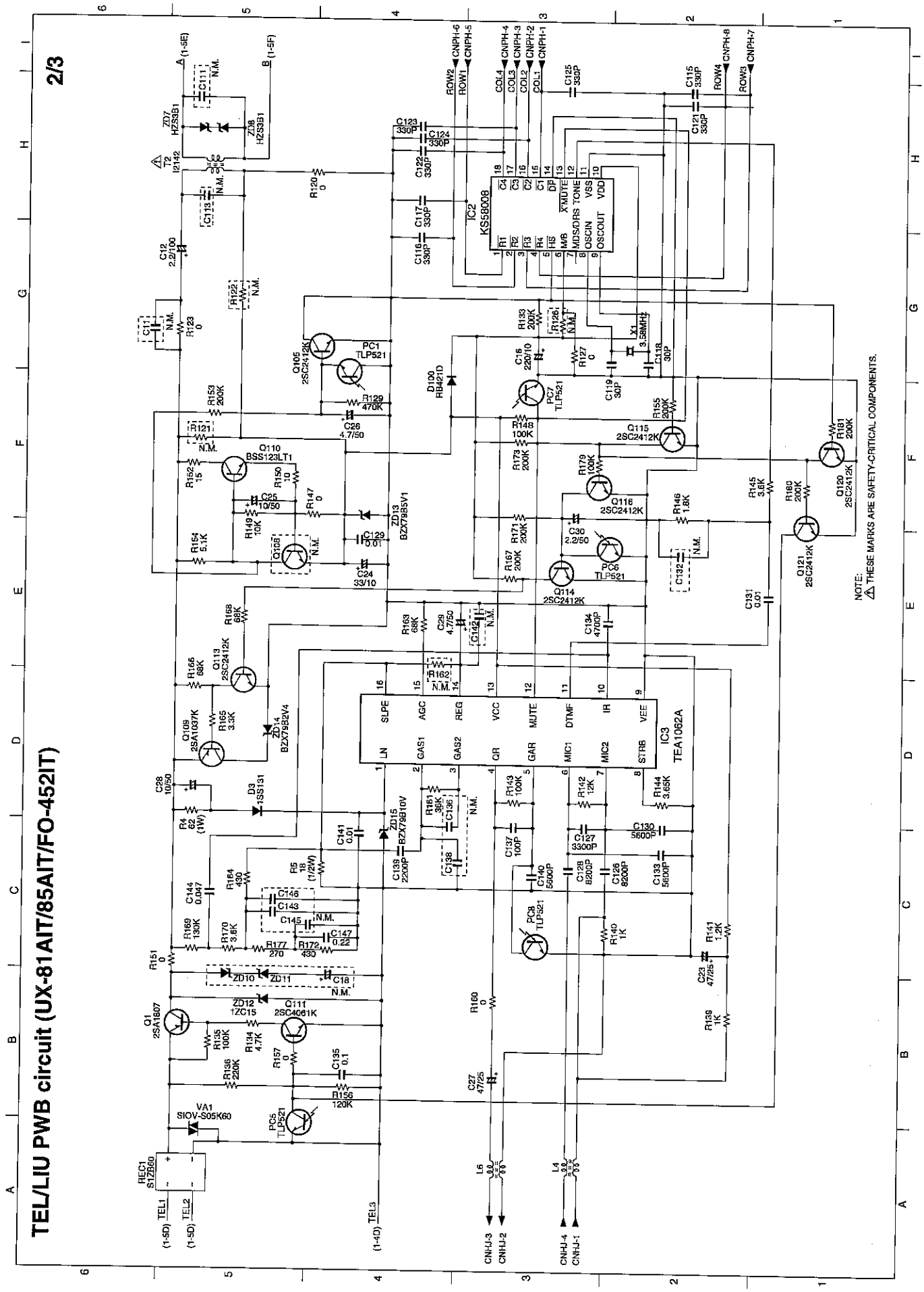
TEL/LIU PWB circuit (UX-81AES)

2/3



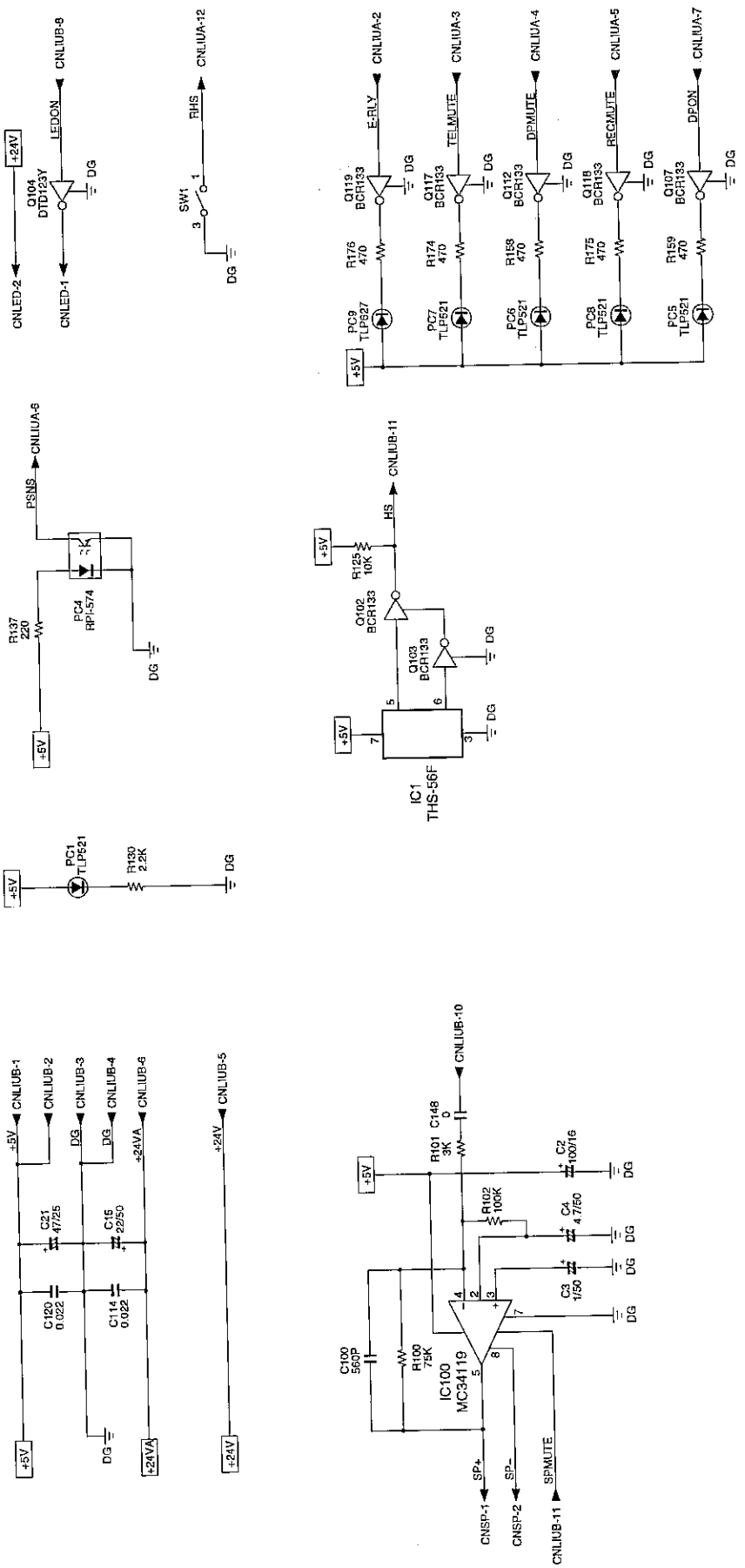

TEL/LIU PWB circuit (UX-81AES)
3/3
CNLIUB-8
LEDON
Q104 DTD123Y
+24V
CNLED-2
CNLED-1
DG
CNLIUB-12
RHS
SW1
CNLIUA-2
E-RLY
Q119 BCR133
R176 470
PC9 TLP627
CNLIUA-3
TELMUTE
Q117 BCR133
R174 470
PC7 TLP521
CNLIUA-4
DPMUTE
Q112 BCR133
R158 470
PC6 TLP521
CNLIUA-5
RECMUTE
Q118 BCR133
R175 470
PC8 TLP521
CNLIUA-7
DPON
Q107 BCR133
R159 470
PC5 TLP521
+5V
CNLIUA-6
PSNS
R137 220
PC4 RPI-574
CNLIUB-11
HS
R125 10K
Q102 BCR133
Q103 BCR133
IC1 THS-56F
PC1
R130
N.M.
CNLIUB-1
CNLIUB-2
CNLIUB-3
CNLIUB-4
CNLIUB-6
+24VA
C21 47/25
C15 22/50
C120 0.022
C114 0.022
CNLIUB-5
CNLIUB-10
R101 8K
C148 0
C2 100/16
R102 100K
C4 4.7/50
C3 1/50
C109 560P
R100 75K
IC100 MC34119
SP+
SP-
SPMUTE
CNSP-1
CNSP-2
CNLIUB-11

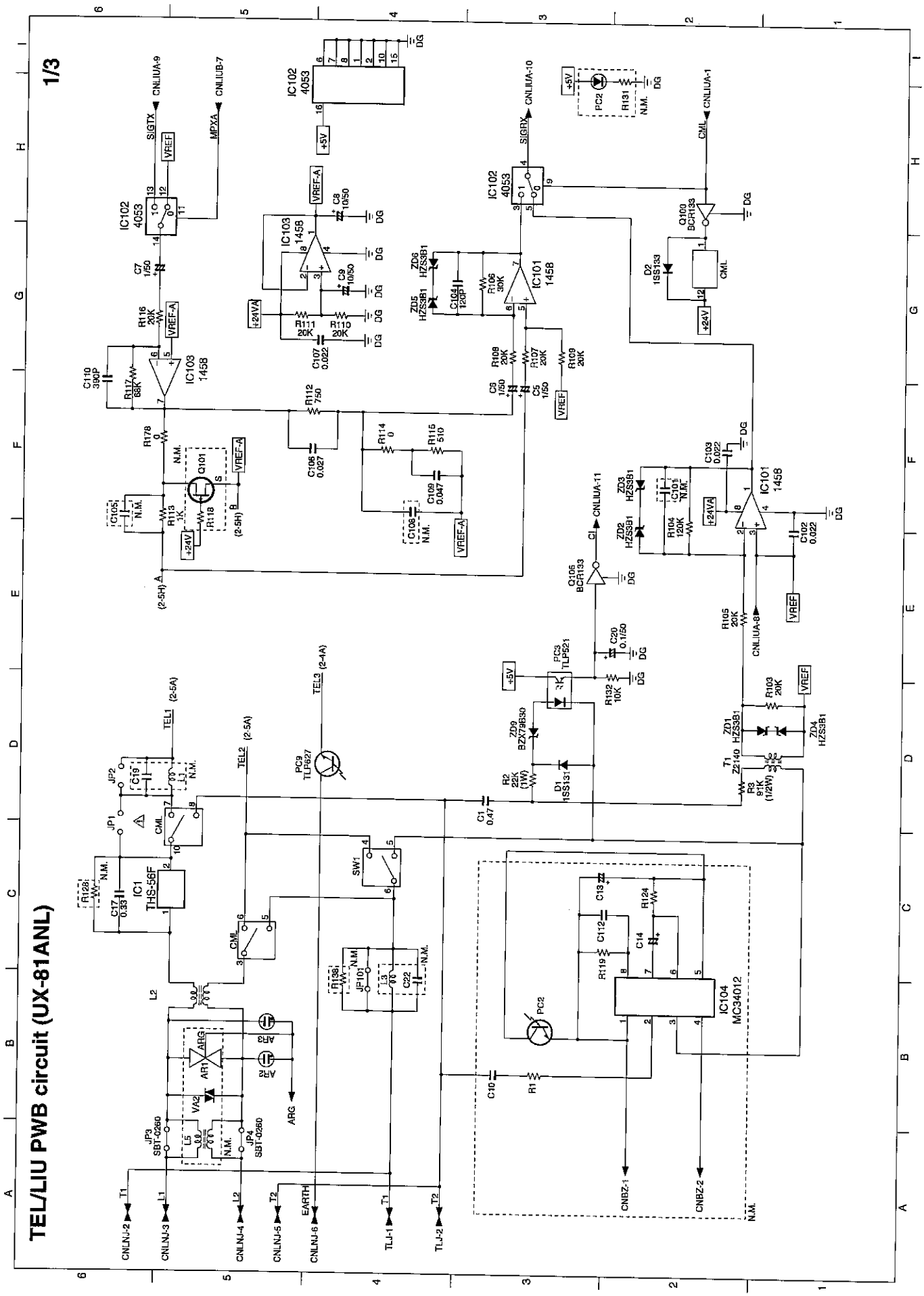

TEL/LIU PWB circuit (UX-81AIT/85AIT/FO-452IT)
1/3


TEL/LIU PWB circuit (UX-81AIT/85AIT/FO-452IT)
2/3
IC3 TEA1062A
IC2 KS58008
Q110 BSS123LT1
Q111 2SC4061K
Q113 2SC2412K
Q114 2SC2412K
Q115 2SC2412K
Q116 2SC2412K
Q120 2SC2412K
Q121 2SC2412K
Q105 2SC2412K
Q109 2SA1037K
Q1 2SA1807
PC1 TLP521
PC5 TLP521
PC6 TLP521
PC7 TLP521
PC8 TLP521
D3 1SS131
D100 RB421D
ZD10
ZD11
ZD12 1ZC15
ZD13 BZX79B5V1
ZD14 BZX79B2V4
ZD15 BZX79B10V
VA1 SIOV-S05K60
REC1 S1ZB60
X1 3.58MHz
NOTE:
⚠ THESE MARKS ARE SAFETY-CRITICAL COMPONENTS.

TEL/LIU PWB circuit (UX-81AIT/85AIT/FO-452IT)

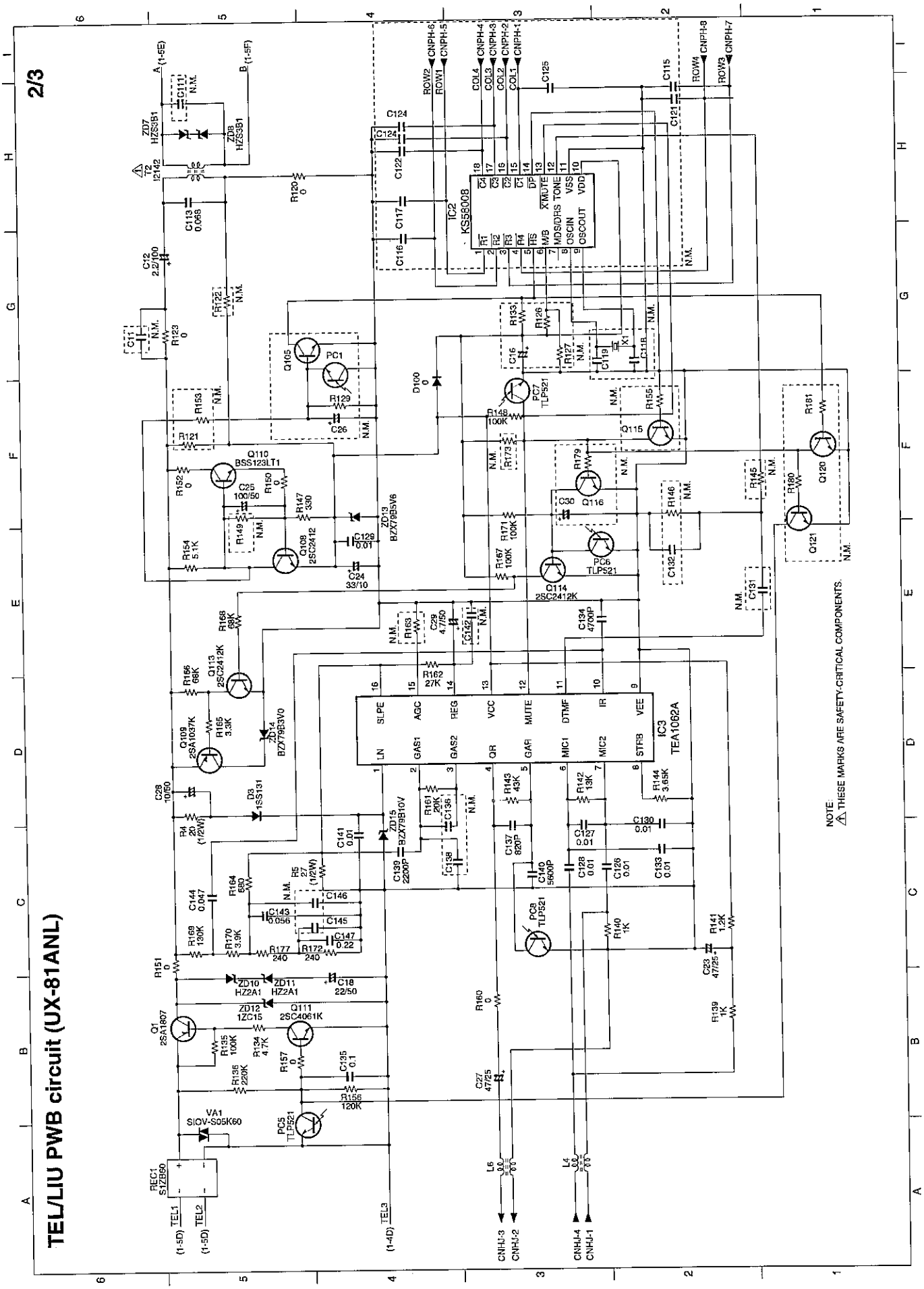
3/3

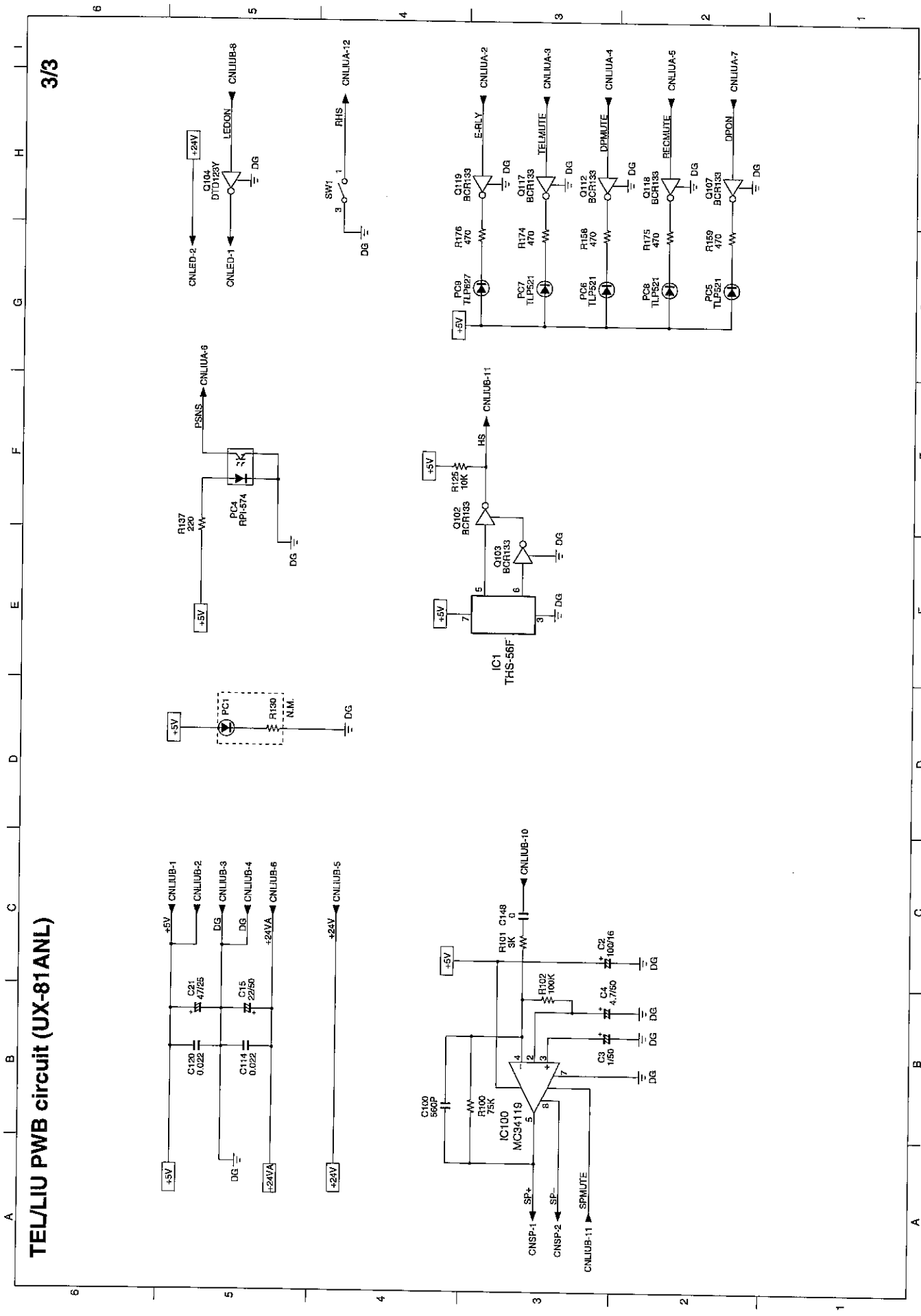


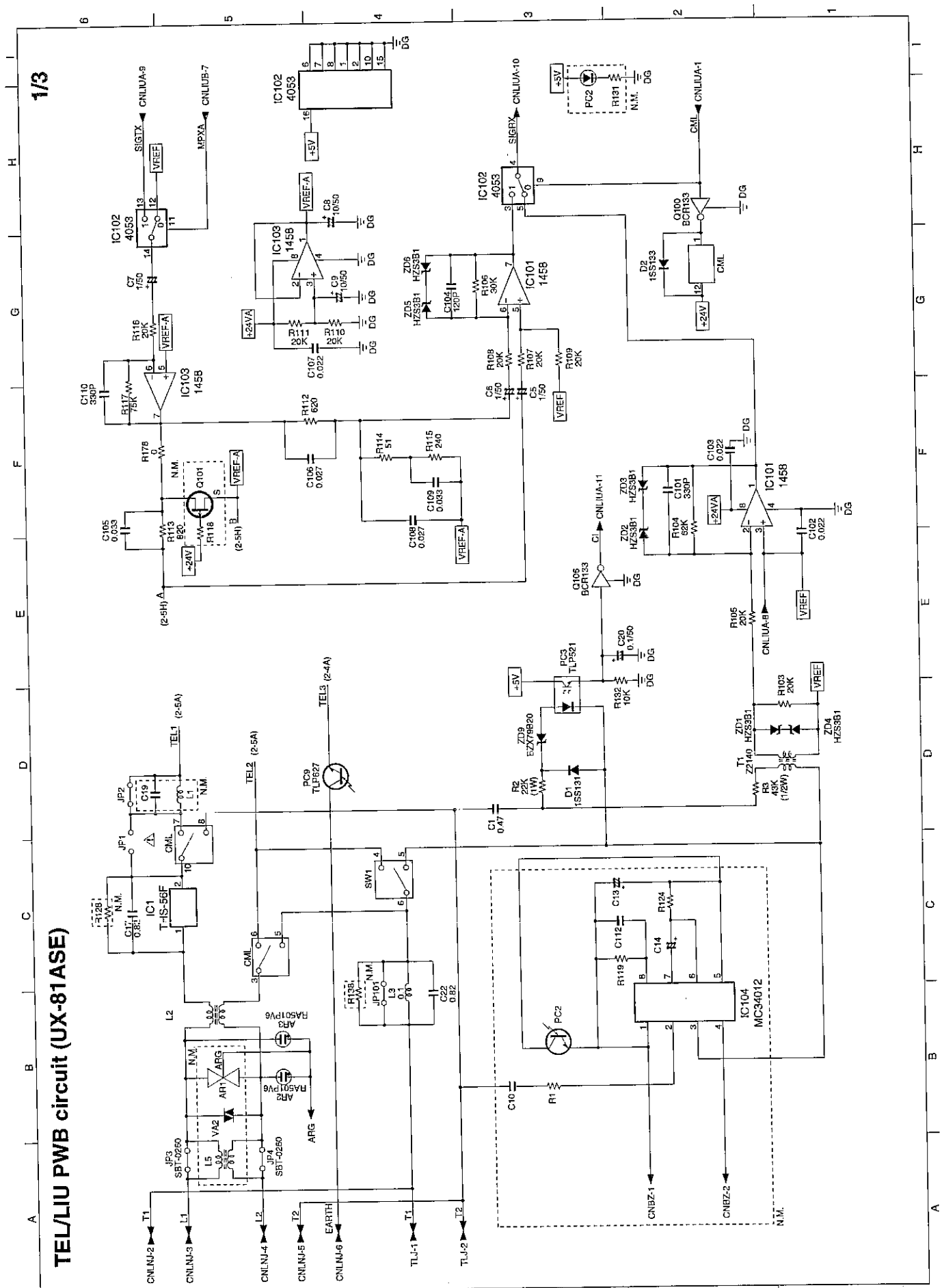

TEL/LIU PWB circuit (UX-81ANL)
1/3
IC102 4053
IC103 1458
IC101 1458
IC1 THS-56F
IC104 MC34012
CNLIUA-9
CNLIUB-7
CNLIUA-10
CNLIUA-1
CNLIUA-11
CNLIUA-8
CNLNJ-2
CNLNJ-3
CNLNJ-4
CNLNJ-5
CNLNJ-6
TLJ-1
TLJ-2
CNBZ-1
CNBZ-2
SIGTX
SIGRX
MPXA
VREF
VREF-A
CML
+5V
+24V
+24VA
DG
N.M.
TEL1 (2-5A)
TEL2 (2-5A)
TEL3 (2-4A)
(2-5H) A
(2-5H) B

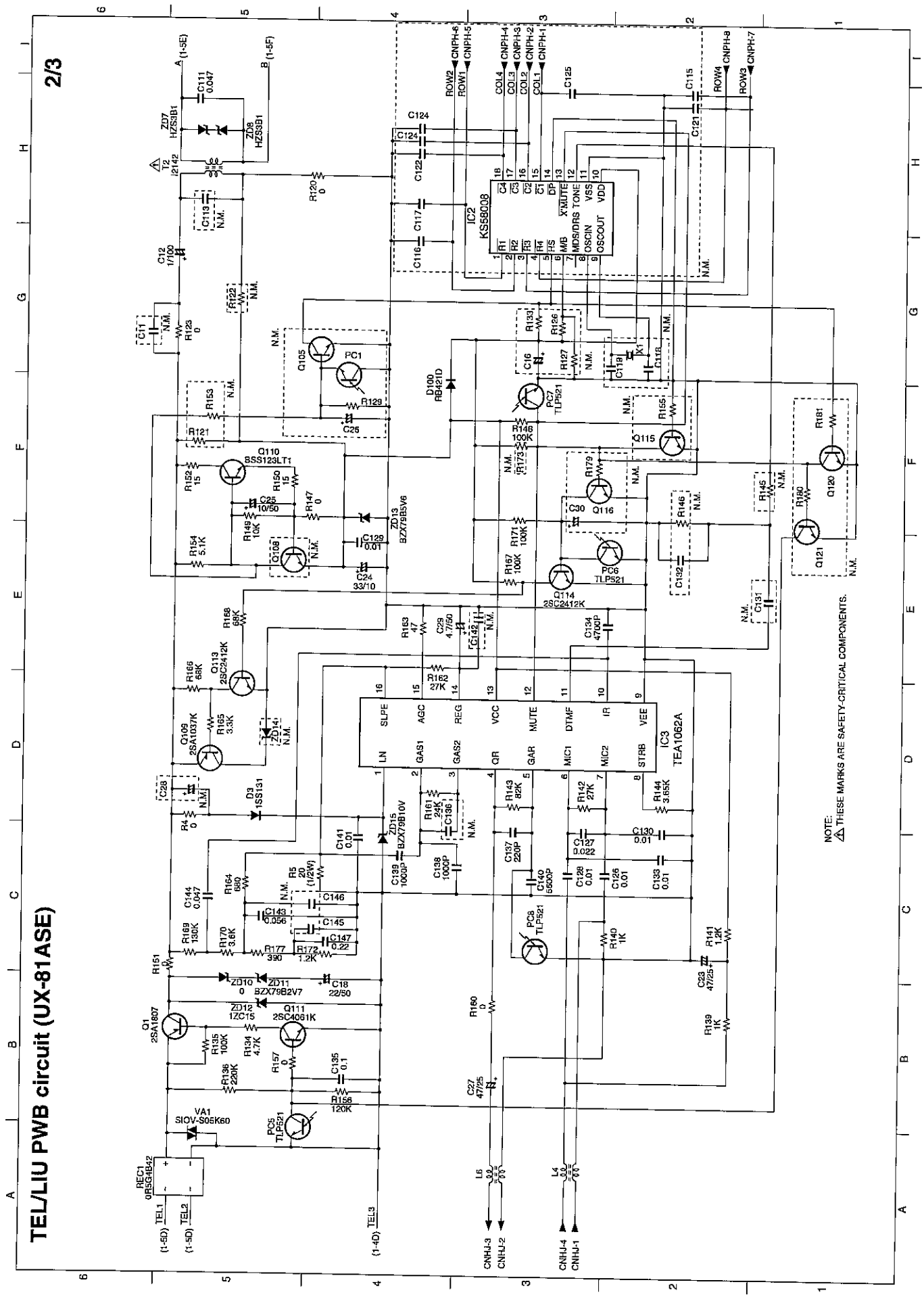
TEL/LIU PWB circuit (UX-81ANL)

2/3



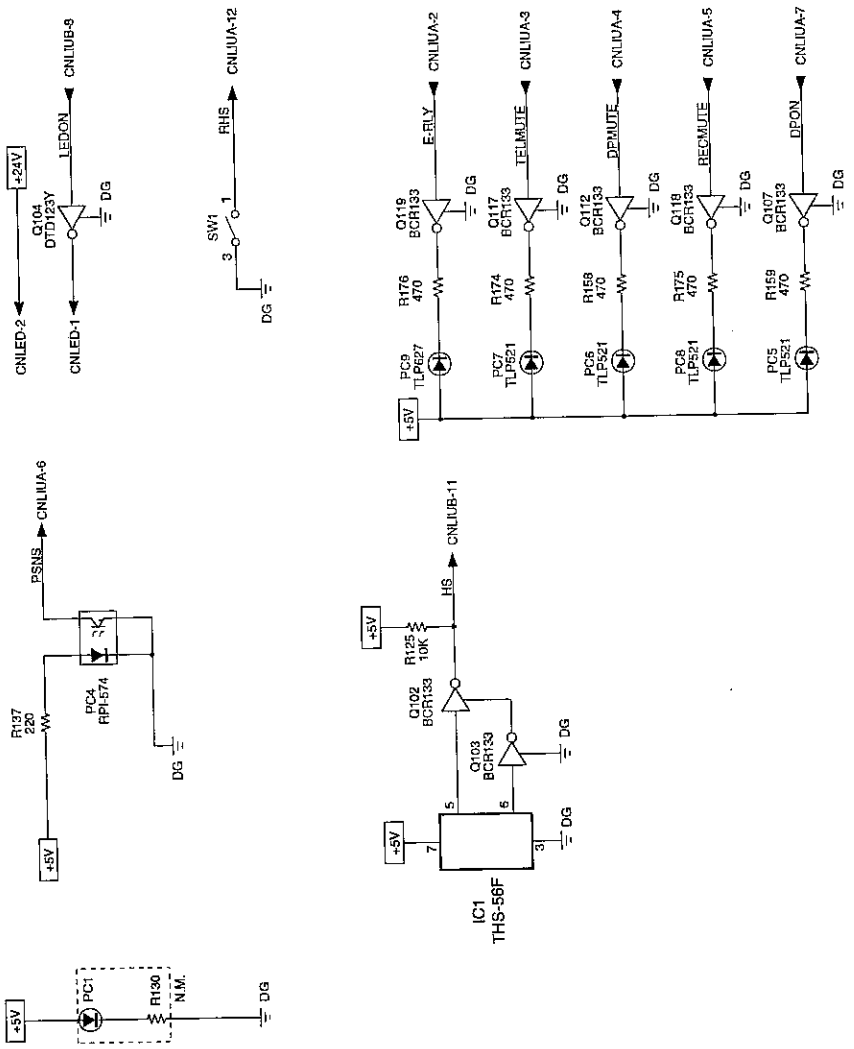

TEL/LIU PWB circuit (UX-81ANL)
3/3
CNLIUB-8
LEDON
Q104 DTD123Y
+24V
DG
CNLED-2
CNLED-1
CNLIUA-12
RHS
SW1
DG
CNLIUA-2
E-RLY
Q119 BCR133
R176 470
PC9 TLP627
CNLIUA-3
TELMUTE
Q117 BCR133
R174 470
PC7 TLP521
CNLIUA-4
DPMUTE
Q112 BCR133
R156 470
PC6 TLP521
CNLIUA-5
RECMUTE
Q118 BCR133
R175 470
PC8 TLP521
CNLIUA-7
DPON
Q107 BCR133
R159 470
PC5 TLP521
+5V
CNLIUA-6
PSNS
R137 220
PC4 RPI-574
3K
CNLIUB-11
HS
R125 10K
Q102 BCR133
Q103 BCR133
IC1 THS-56F
PC1
R130 N.M.
CNLIUB-1
CNLIUB-2
CNLIUB-3
CNLIUB-4
CNLIUB-6
+24VA
C120 0.022
C21 47/25
C114 0.022
C15 22/50
CNLIUB-5
+24V
CNLIUB-10
R101 5K
C148 0
C2 100/16
R102 100K
C4 4.7/50
C3 1/50
C100 560P
R100 75K
IC100 MC34119
SP+
SP-
SPMUTE
CNSP-1
CNSP-2
CNLIUB-11


1/3
TEL/LIU PWB circuit (UX-81ASE)
IC102 4053
IC103 1458
IC101 1458
IC1 T-HS-56F
IC104 MC34012
Q101
Q106 BCR133
Q109 BCR133
PC2
PC3 TLP521
PC9 TLP627
SW1
T1 Z2140
ZD1 HZS3B1
ZD2 HZS3B1
ZD3 HZS3B1
ZD4 HZS3B1
ZD5 HZS3B1
ZD6 HZS3B1
ZD9 EZX79B20
D1 1SS131
D2 1SS133
AR1
AR2
AR3 RA501PV6
VA2
CNLIUA-9
CNLIUB-7
CNLIUA-10
CNLIUA-1
CNLIUA-11
CNLIUA-8
CNLNJ-2
CNLNJ-3
CNLNJ-4
CNLNJ-5
CNLNJ-6
TLJ-1
TLJ-2
CNBZ-1
CNBZ-2
SIGTX
SIGRX
MPXA
CML
VREF
VREF-A
ARG
EARTH
+5V
+24V
+24VA
-24V
DG
N.M.
TEL1 (2-5A)
TEL2 (2-5A)
TEL3 (2-4A)
(2-5H)
(2-4A)

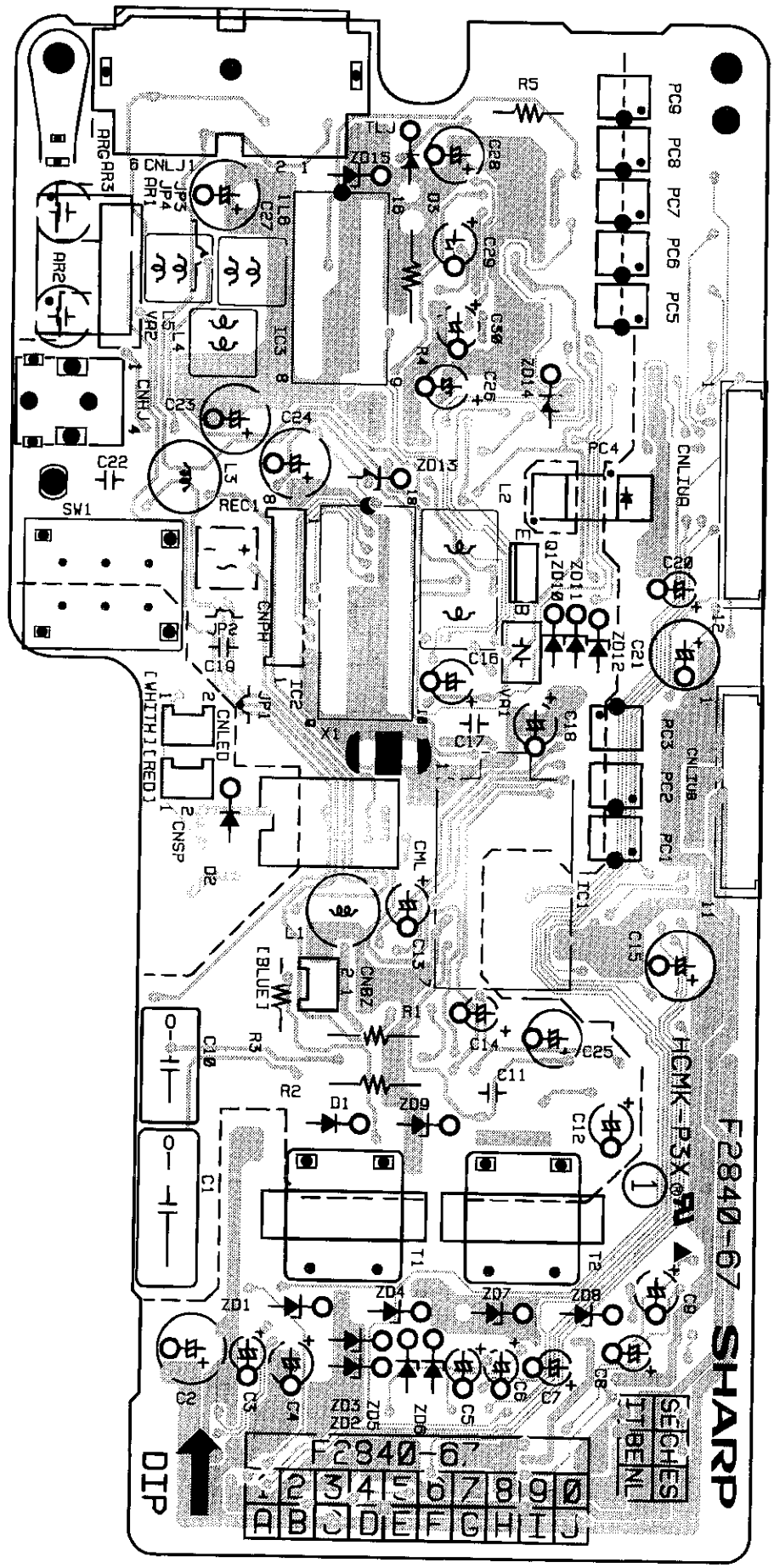

TEL/LIU PWB circuit (UX-81ASE)
2/3
IC3 TEA1062A
IC2 KS58008
Q110 BSS123LT1
Q111 2SC4061K
Q113 2SC2412K
Q114 2SC2412K
Q115
Q116
Q120
Q121
PC1
PC5 TLP521
PC6 TLP521
PC7 TLP521
PC8 TLP521
D100 RB421D
D3 1SS131
ZD10 0
ZD11 BZX79B2V7
ZD12 1ZC15
ZD13 BZX79B5V6
ZD14 N.M.
ZD15 BZX79B10V
ZD7 HZS3B1
ZD8 HZS3B1
Q1 2SA1807
Q109 2SA1037K
VA1 SIOV-S05K60
REC1 0RSG4B42
T2 I2142
NOTE:
⚠ THESE MARKS ARE SAFETY-CRITICAL COMPONENTS.
N.M.
TEL1
TEL2
TEL3
CNHJ-1
CNHJ-2
CNHJ-3
CNHJ-4
CNPH-1
CNPH-2
CNPH-3
CNPH-4
CNPH-5
CNPH-6
CNPH-7
CNPH-8
L4
L6

TEL/LIU PWB circuit (UX-81ASE)

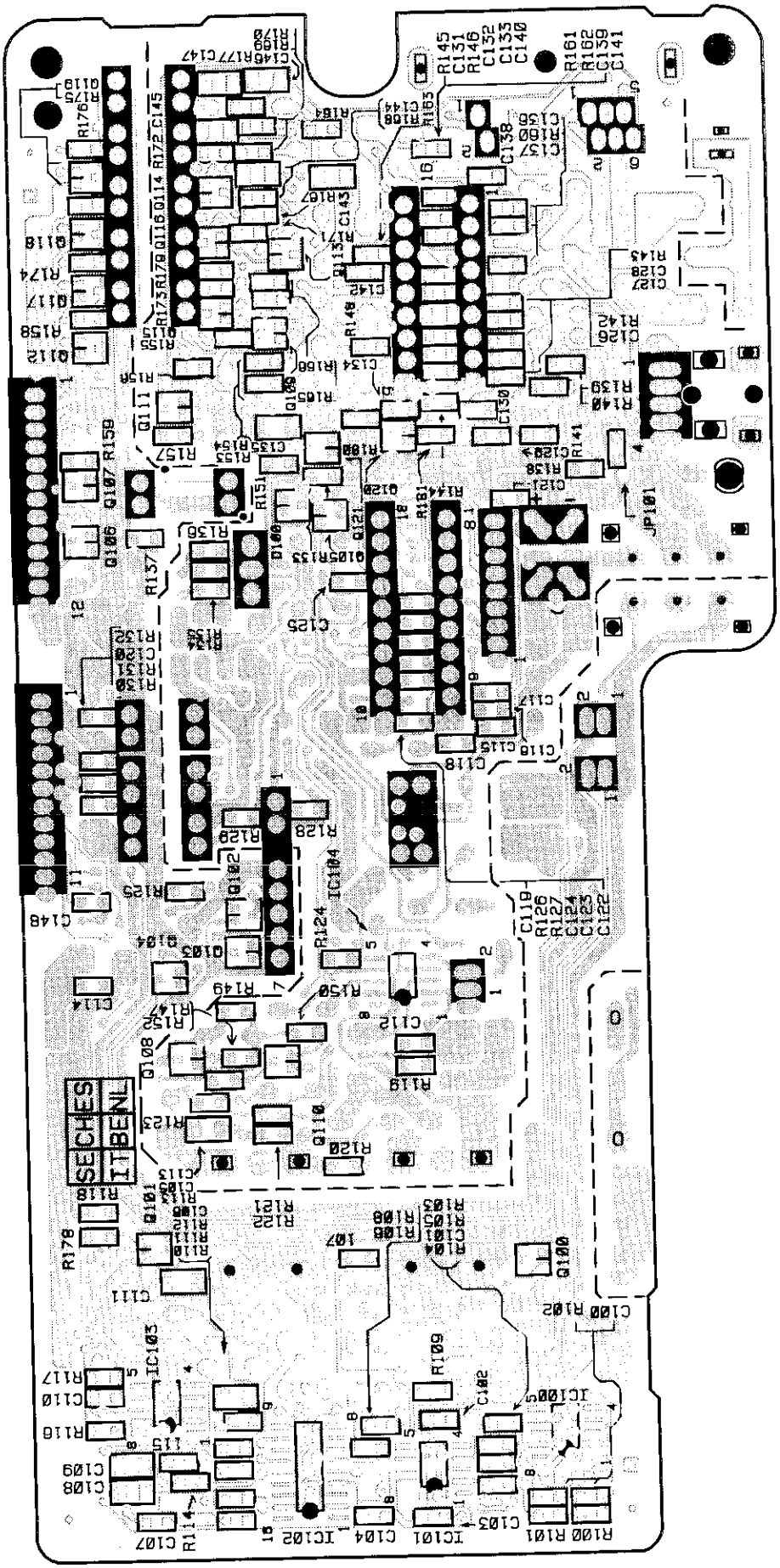
3/3



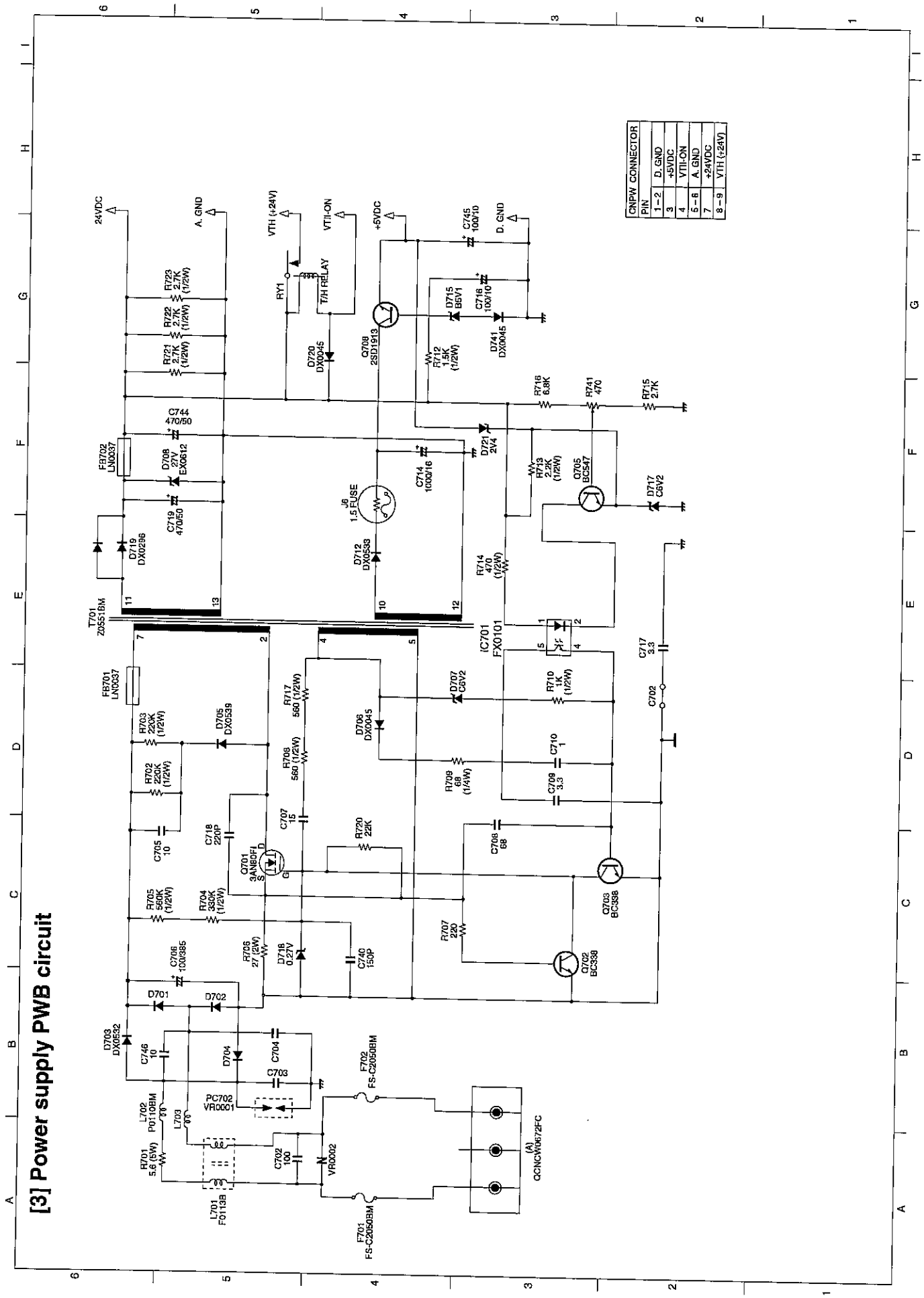
TEL/LIU PWB parts layout (Top side)
(UX-81ABE/ACH/AES/AIT/ANL/ASE/85AIT/FO-452IT)



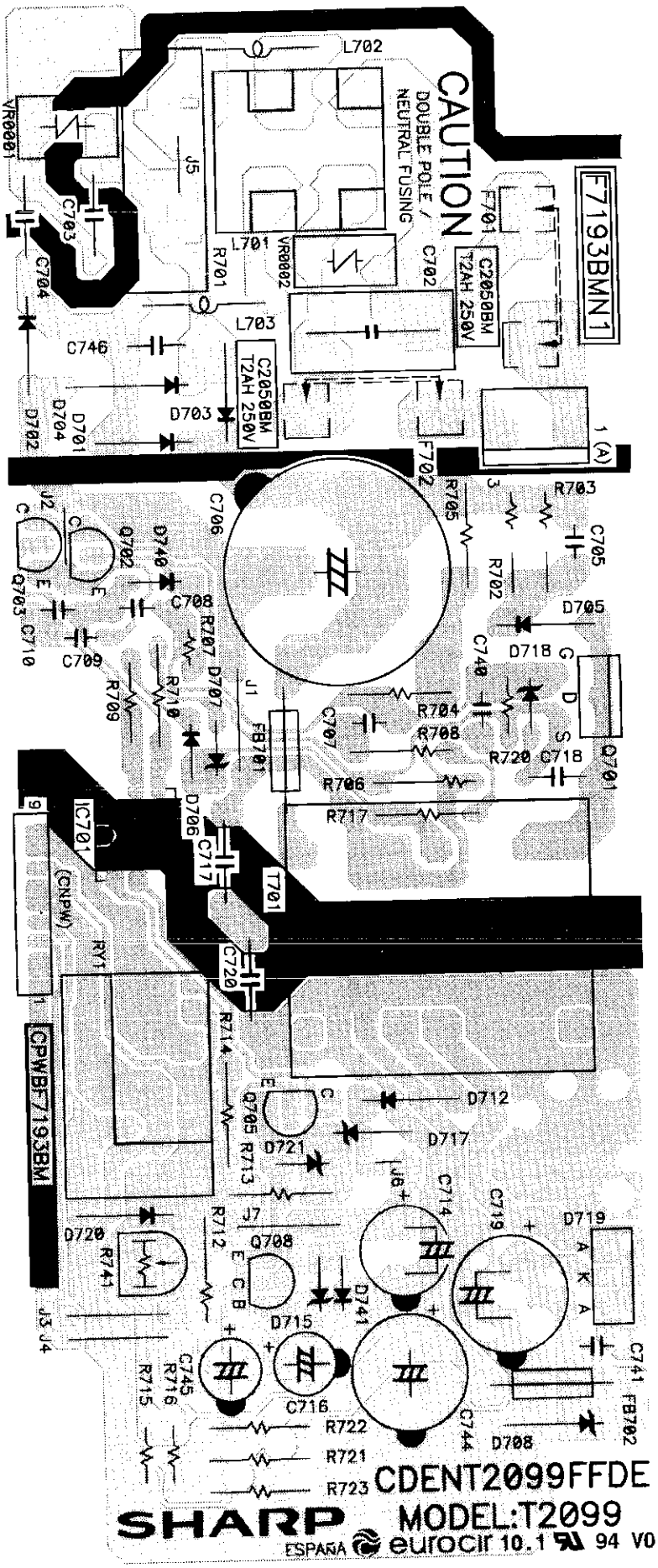
TEL/LIU PWB parts layout (Bottom side)
(UX-81ABE/ACH/AES/AIT/ANL/ASE/85AIT/FO-452IT)

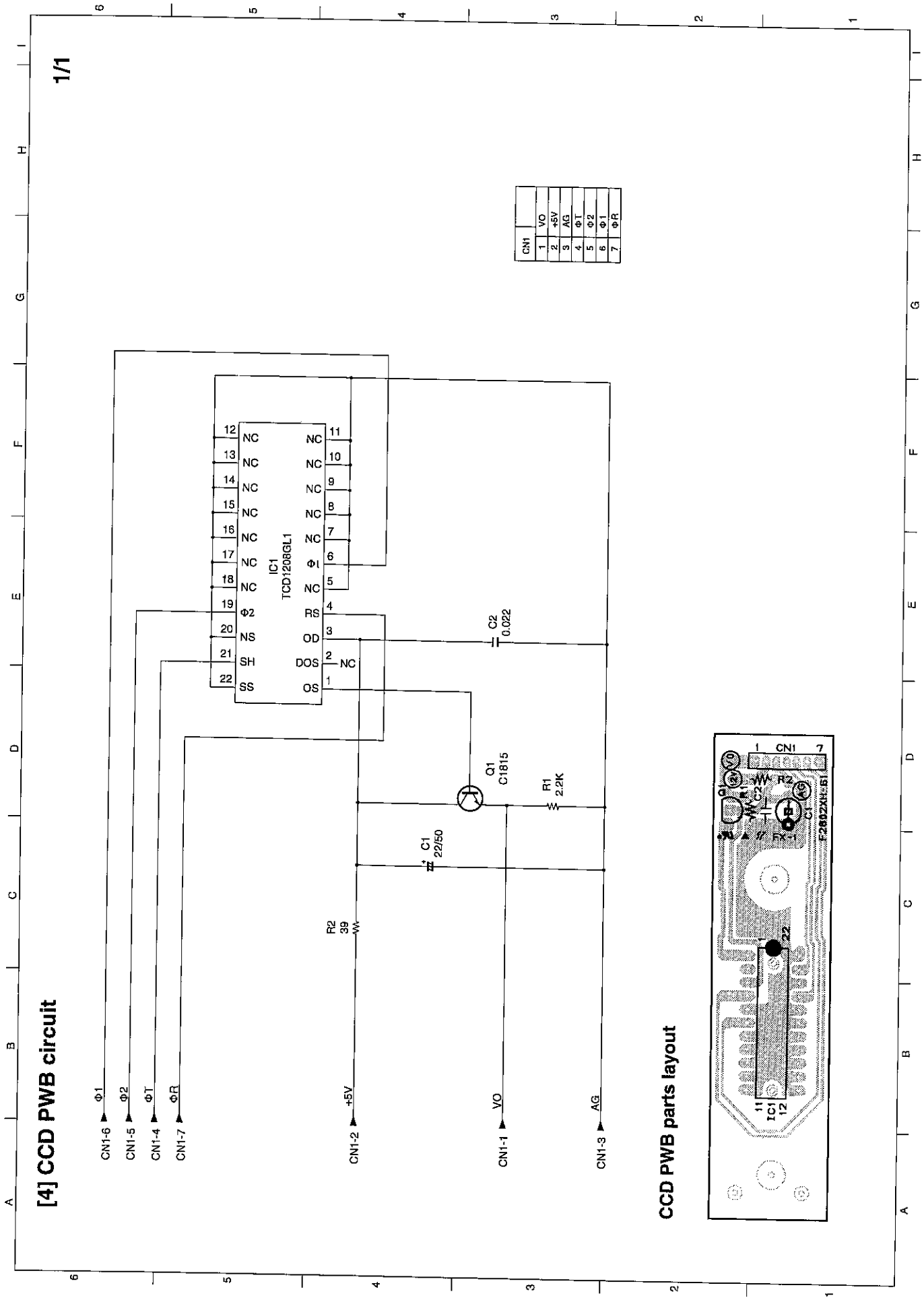


[3] Power supply PWB circuit

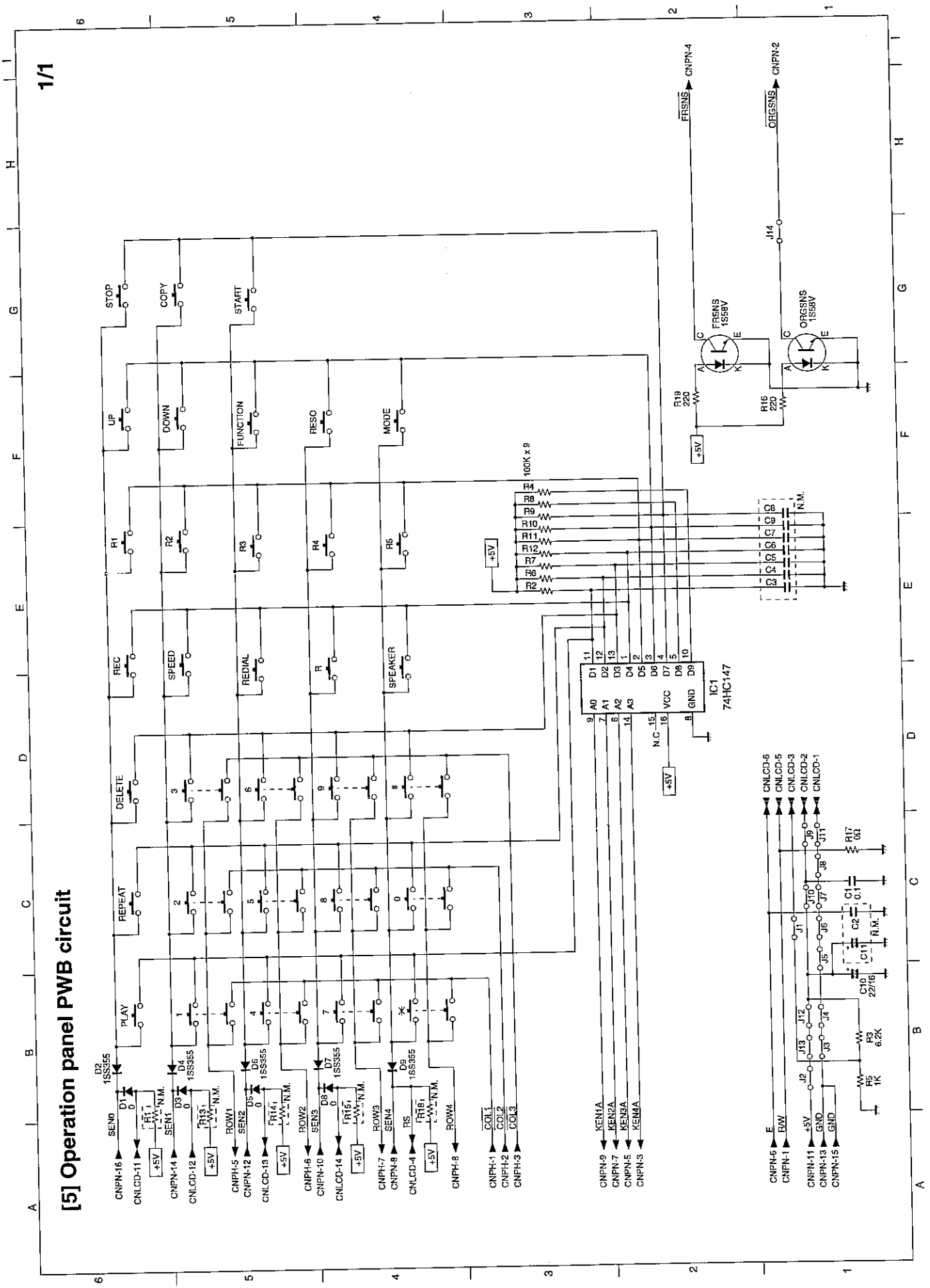


Power supply PWB parts layout

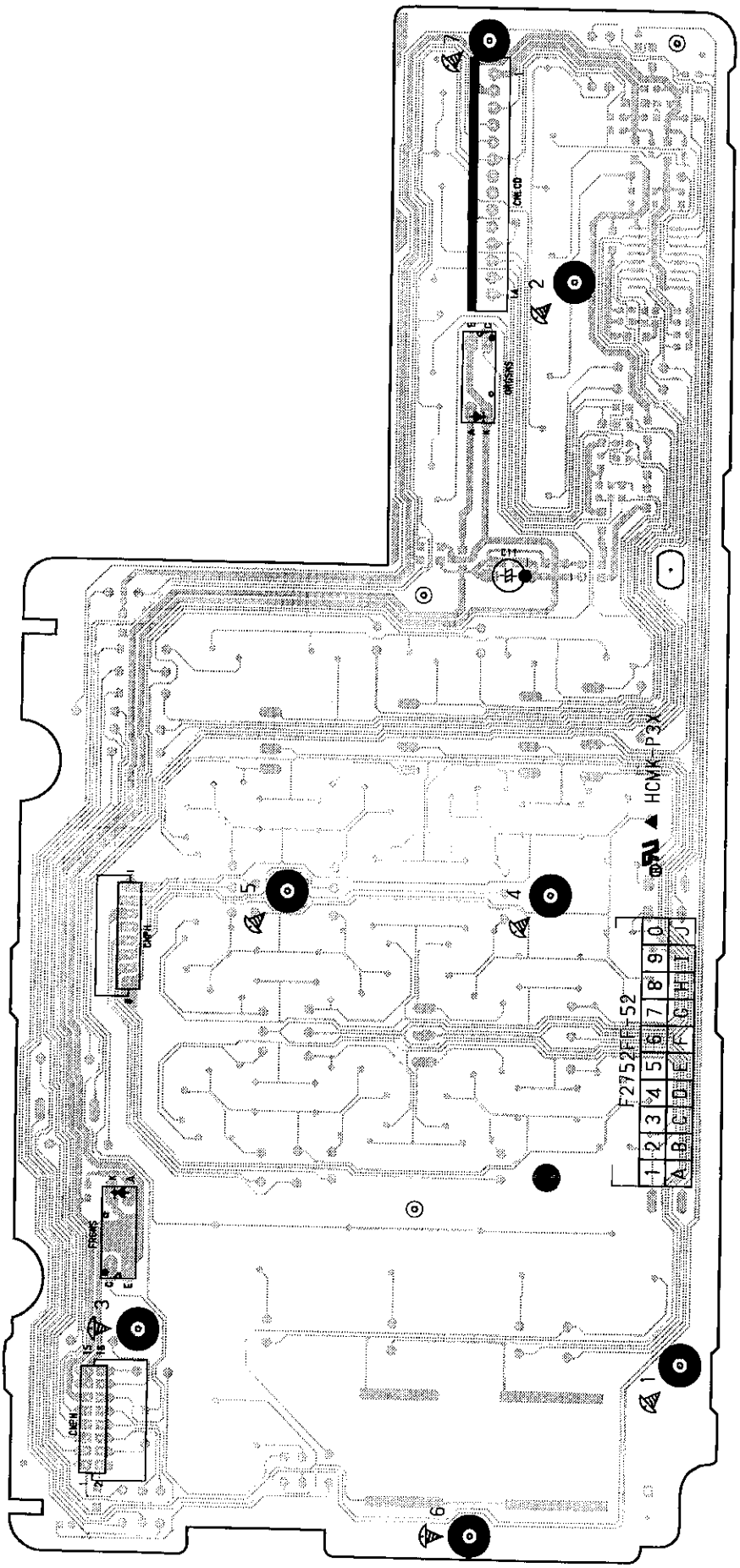



1/1
[4] CCD PWB circuit
CCD PWB parts layout
CN1
VO
+5V
AG
ΦT
Φ2
Φ1
ΦR
IC1
TCD1208GL1
NC
Φ2
NS
SH
SS
Φ1
RS
OD
DOS
OS
C2
0.022
Q1
C1815
R1
2.2K
C1
22/50
R2
39
CN1-6
CN1-5
CN1-4
CN1-7
CN1-2
CN1-1
CN1-3

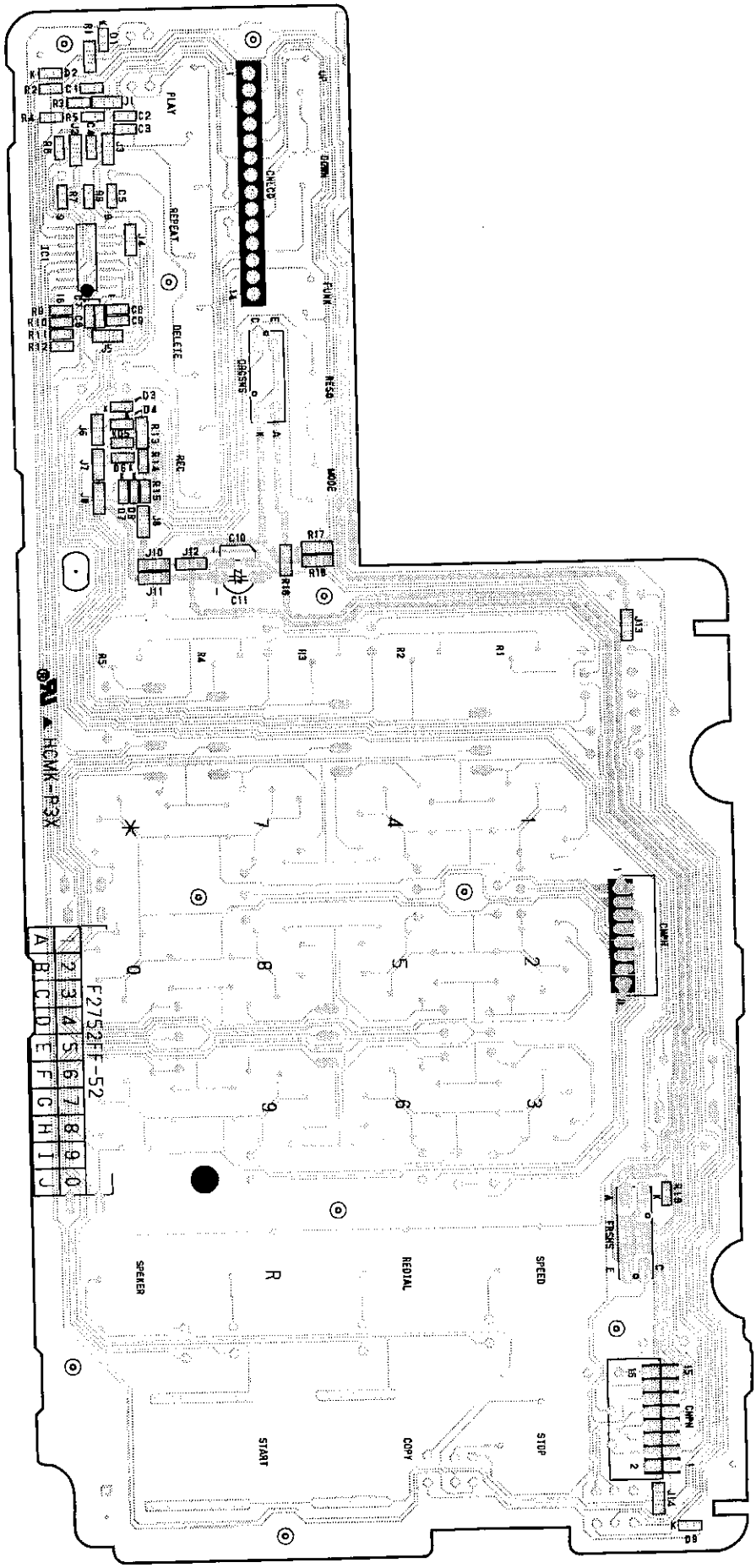
[5] Operation panel PWB circuit



Operation panel PWB parts layout (Top side)

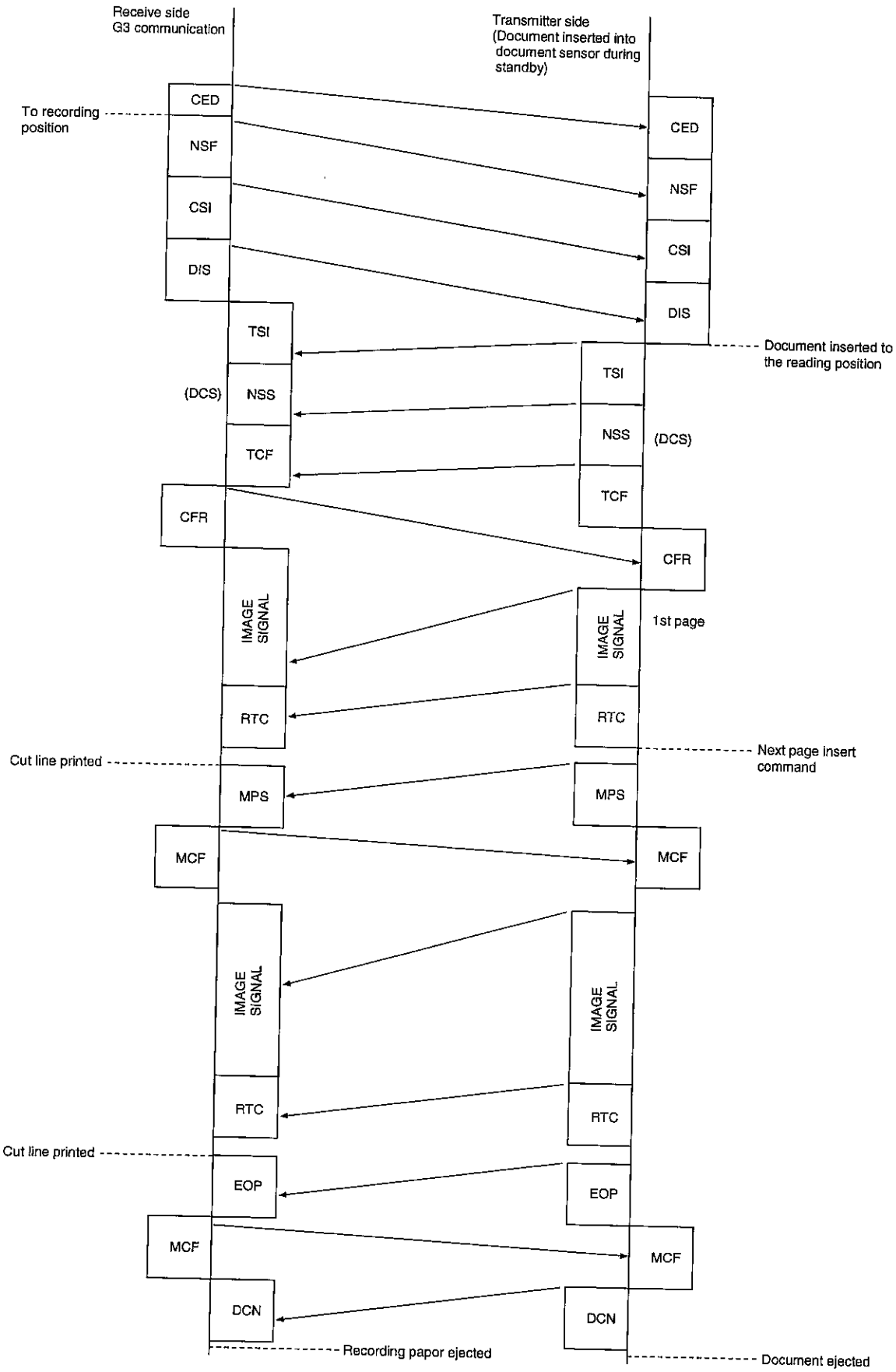


Operation panel PWB parts layout (Bottom side)

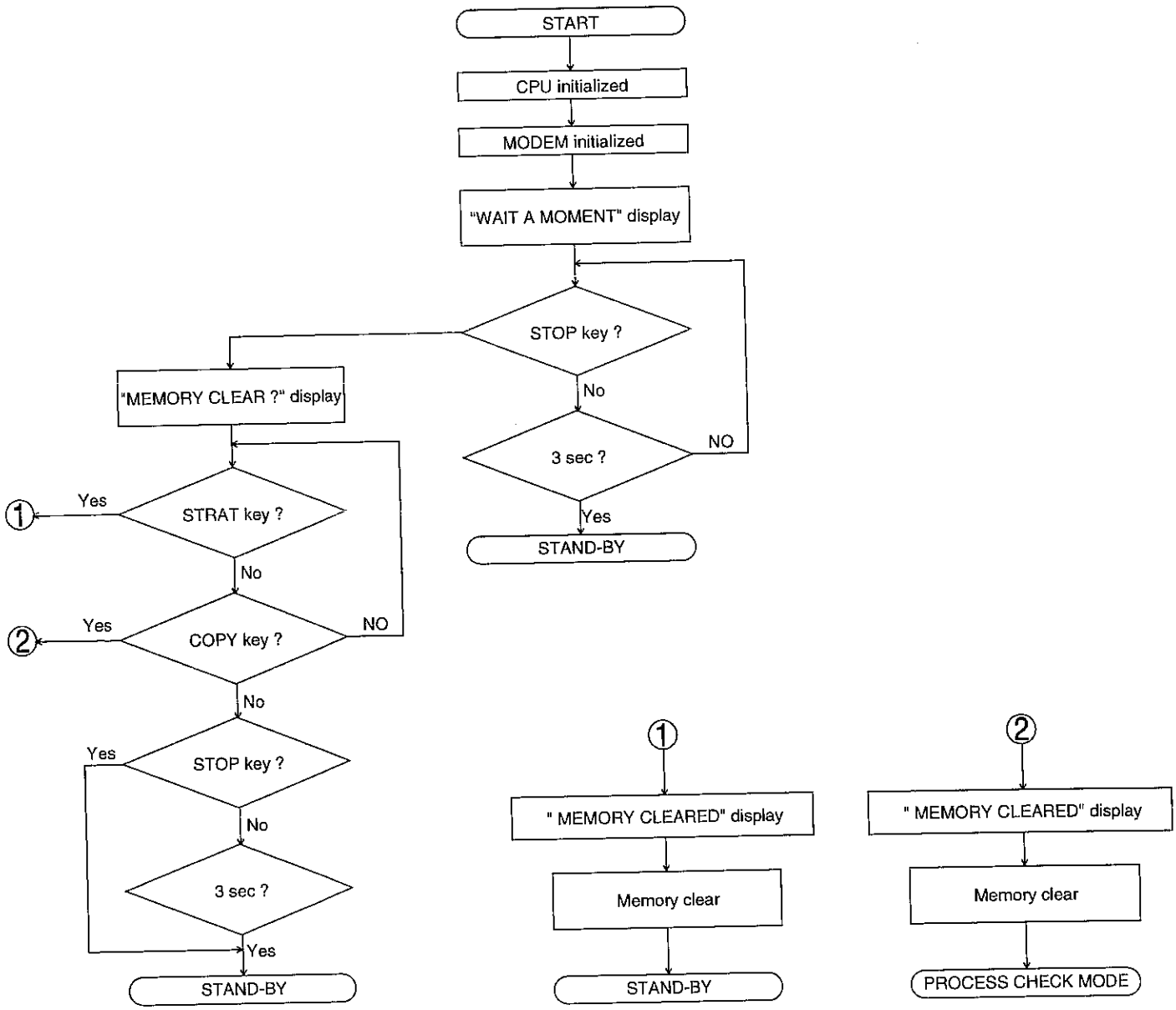


CHAPTER 7. OPERATION FLOWCHART

[1] Protocol



[2] Power on sequence



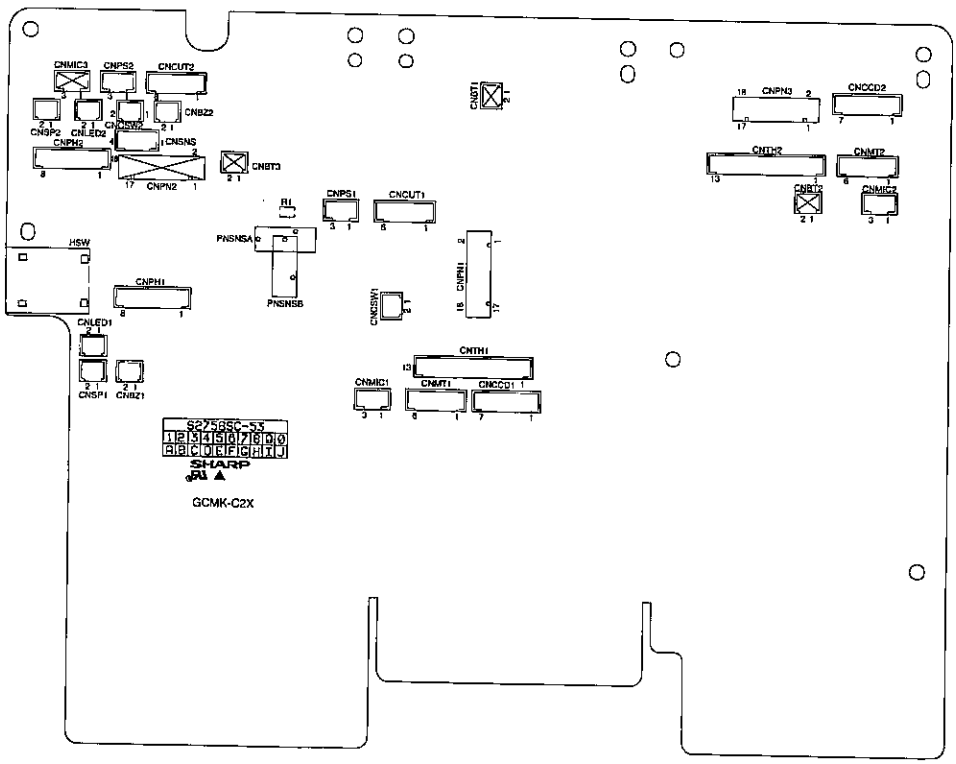
CHAPTER 8. OTHERS

[1] Service tools

1. List

NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	CPWBS2758SC01	Extension board unit	1	BV
2	UKOGM2028SCZZ	Optical adjustment jig	1	BE

Extension board unit

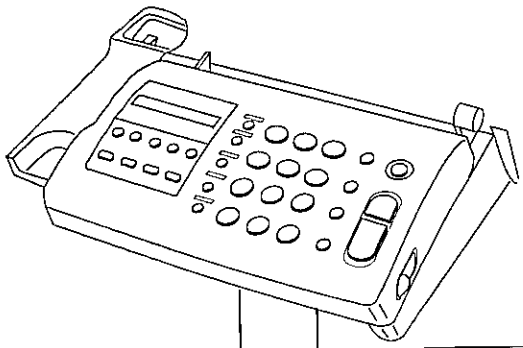


NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	QCNW-4414SCZZ	CABLE (CNBZ2)	1	AF
2	QCNW-4236SCZZ	CABLE (CNMIC2)	1	AE
3	QCNW-3872SCZZ	CABLE (CNTH2)	1	AP
4	QCNW-4442SCZZ	CABLE (CNPN3)	1	AQ
5	QCNW-4413SCZZ	CABLE (CNSNS)	1	AX
6	QCNW-3867SCZZ	CABLE (CNCSW2)	1	AE
7	QCNW-3868SCZZ	CABLE (CNLED2)	1	AE
8	QCNW-3870SCZZ	CABLE (CNMT2)	1	AH
9	QCNW-3882SCZZ	CABLE (CNPS2)	1	AF
10	QCNW-4412SCZZ	CABLE (CNPH2)	1	AL
11	QCNW-4411SCZZ	CABLE (CNCUT2)	1	AH
12	QCNW-4112SCZZ	CABLE (CNCCD2)	1	AG
13	QCNW-3869SCZZ	CABLE (CNSP2)	1	AE
14	QCNCM2442SC0B	CONNECTOR (CNBZ1, CNBZ2)	2	AB
15	QCNCM7014SC0G	CONNECTOR (CNCCD1, CNCCD2)	2	AB
16	QCNCM7014SC0B	CONNECTOR (CNCSW1, CNCSW2, CNLED1, CNLED2)	4	AD
17	QCNCM2401SC0F	CONNECTOR (CNCUT1, CNCUT2)	2	AB
18	QCNCM2401SC0C	CONNECTOR (CNMIC1, CNMIC2)	2	AB
19	QCNCM7014SC0F	CONNECTOR (CNMT1, CNMT2)	2	AB
20	QCNCM7014SC0H	CONNECTOR (CNPH1, CNPH2)	2	AB
21	QCNCM2482SC1F	CONNECTOR (CNPN1, CNPN3)	2	AF
22	QCNCM7014SC0C	CONNECTOR (CNPS1, CNPS2)	2	AA
23	QCNCM7014SC0D	CONNECTOR (CNSNS)	1	AB
24	QCNCM2401SC0B	CONNECTOR (CNSP1, CNSP2)	2	AA
25	QCNCM7014SC1C	CONNECTOR (CNTH1, CNTH2)	2	AC
26	QSW-Z2214SCZZ	HOOK SWITCH (HSW)	1	AH
27	VHGP1S58V//-1	(PSNS)	1	AE
28	QPWBS2758SCZZ	EXTENSION BOARD (WITHOUT PARTS)	1	--
29	VRD-RC2EY221J	RESISTOR (1/4W 220Ω ±5%) (R1)	1	AA

2. Description

2-1. Extension board unit

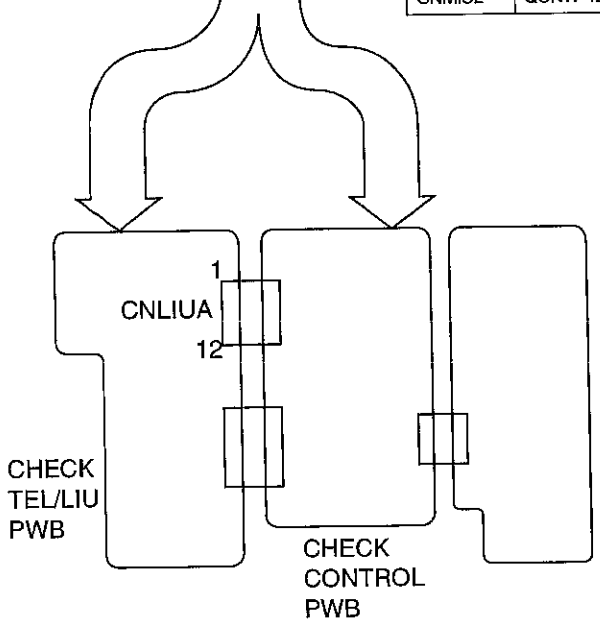
1. Remove the TEL/LIU PWB, control PWB and Power Supply PWB from this unit, and mount the extension board unit instead.
   - Before connecting the wiring to the extension board unit, set the test PWB switches to the fixed position.
2. The setting is as follows.



A set with a mounted extension board unit

Connector	Cable
CNCSW2	QCNW-3867SCZZ
CNMT2	QCNW-3870SCZZ
CNPN3	QCNW-4442SCZZ
CNCCD2	QCNW-4112SCZZ
CNLED2	QCNW-3868SCZZ
CNSP2	QCNW-3869SCZZ
CNTH2	QCNW-3872SCZZ
CNSNS	QCNW-4413SCZZ
CNMIC2	QCNW-4236SCZZ

Cable color	CNSNS	Connected to (PWB)
1. Black	$\overline{\text{PSNS}}$	CNLIUA-6
2. Brown	RHS	CNLIUA-12
3. Red	HS1	N.C.
4. Orange	HS2	N.C.



The recording paper sensor ($\overline{\text{PSNS}}$) and the hook switch are operated by OR of the mechanical unit switch and the test PWB switch. When performing installation in the machine unit, set the test PWB switches to the fixed position.

	Mechanical unit	PWB to be tested
	Actual operation with mechanical unit	
Recording paper sensor	ON/OFF operation	ON (Photo interrupter is interrupted.)
Hook SW	ON/OFF operation	ON
	PWB sensor check	
Recording paper sensor	ON	ON/OFF operation
Hook SW	ON	ON/OFF operation

2-2. Scan optical system adjustment

(1) Outline

The adjustment procedures of the scan optical system are described below:

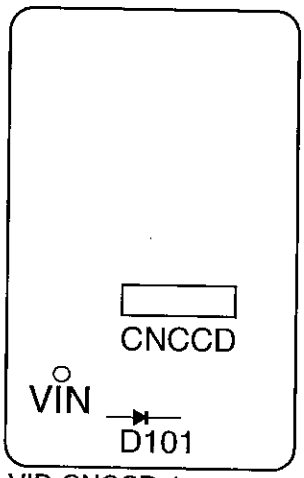
(2) Adjustment procedures

① Switch off the machine and disconnect the AC power cable from the wall socket.

② Fully open the upper cabinet, remove the fixing screws of the recording paper tray and remove the recording paper tray. In order to perform a focus adjustment, remove the optical system unit from the frame.

③ Disconnect the main pwb from the TEL/LIU pwb.

④ Connect your oscilloscope channel 1 to the VIN signal and channel 2 of your oscilloscope to ϕT signal (Refer Pin 4 of connector CNCCD on the main pwb). Connect the earth clips of either probe to AG ground as shown. Set the trigger to channel 2.



VID CNCCD-1
ΦT CNCCD-4
VG CNCCD-3

⑤ Re-connect the main pwb to the TEL/LIU pwb and connect these circuit boards to the connectors on the chassis.

⑥ Re-assemble up to and including the recording paper tray to the main chassis and close upper cabinet.

⑦ Plug the AC power cable into the wall outlet and turn the fax machine on.

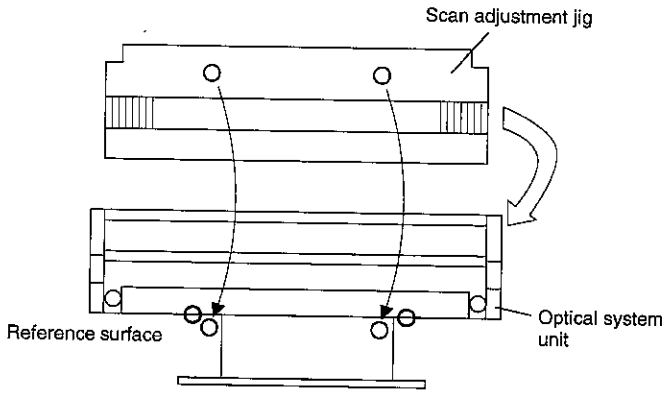
⑧ Insert a test chart in the document hopper and execute the CCD Adjust Mode diagnostic. Press the START key to enable local copy until approximately one fifth of the page has been copied, then press the STOP key to enable the CPU wait state.

⑨ Fully open the upper cabinet and remove the recording paper tray.

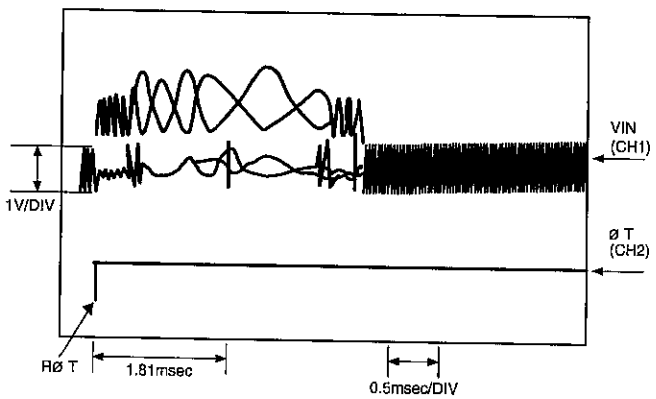
⑩ Install the scan adjustment jig to the optical system unit, so that the pattern surface is on the lower side.

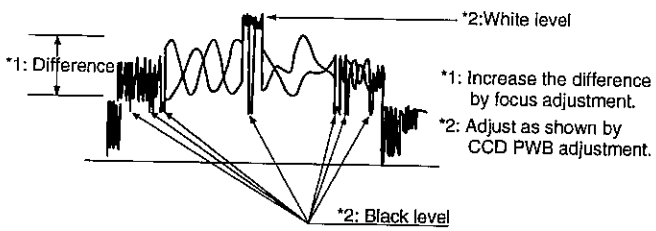
⑪ Fit the pins of the scan adjustment jig to the holes of the optical system frame.

⑫ Lightly loosen the red screws of the CCD pwb and obtain the VID signal waveform in synchronization with ϕT signal waveform. Adjust the CCD pwb positioning to obtain the waveform as shown below.



CCD waveform




*2:White level
*1: Difference
*1: Increase the difference by focus adjustment.
*2: Adjust as shown by CCD PWB adjustment.
*2: Black level

[CCD waveform model]

⑬ After completing the CCD adjustment, tighten the two red screws on the CCD pwb and apply screw locking material to prevent the CCD pwb from moving.

⑭ Assemble the recording paper tray and fixing screws.

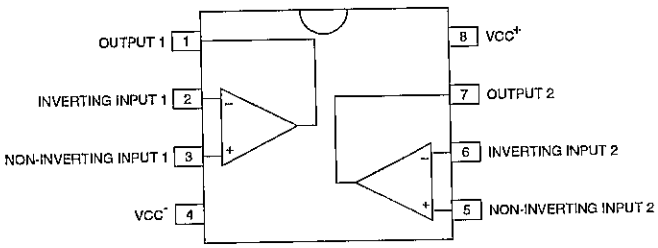
[2] IC signal name

CONTROL P.W.B. UNIT

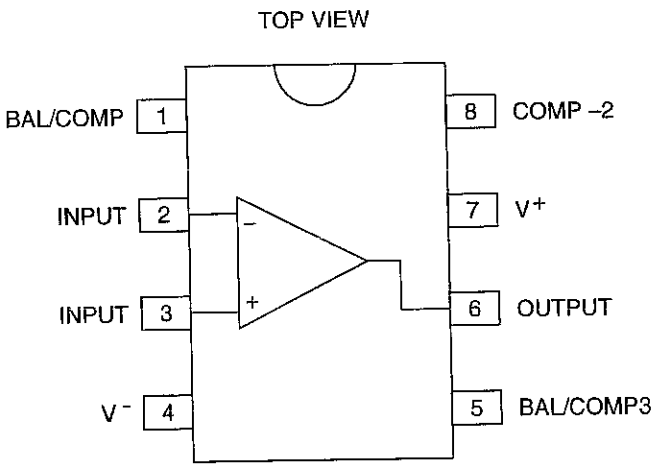
IC3: VHiR96SFELC-1 (R96DFXL)

Refer to the table on p. 5-7.

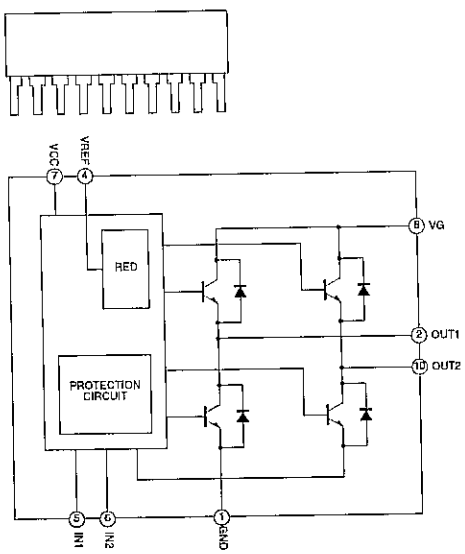
IC103, 105, 106, 107: VHiMC1458DTR/ (MC1458)



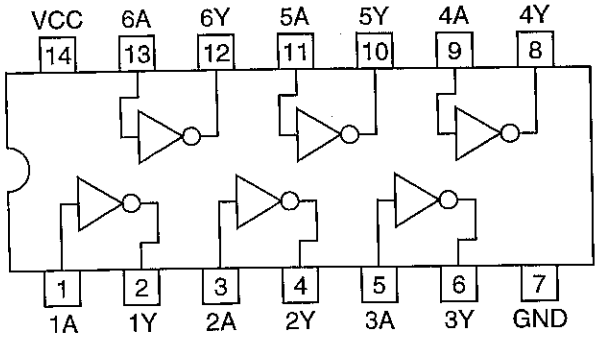
IC102: VHiLM318M//-1 (LM318)



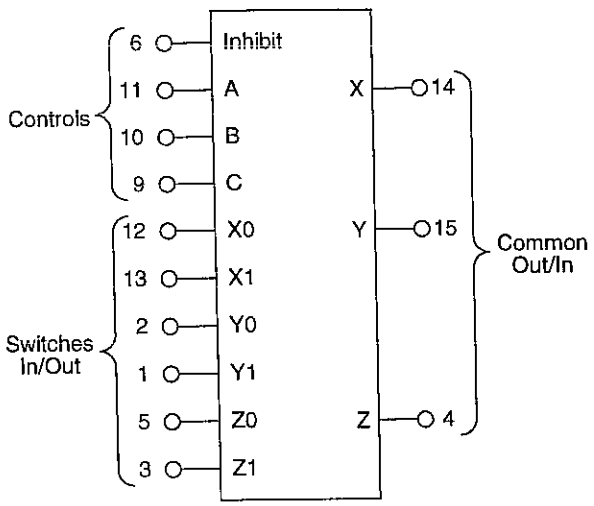
IC7: VHiTA7291PV-1 (TA7291PV)



IC108: VHiMC74HCU04F (MC74HCU04F)

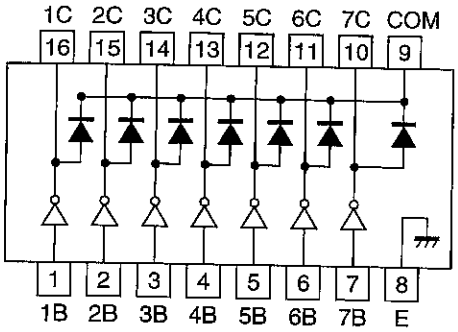


IC104: VHiMC14053DR2 (MC14053B)

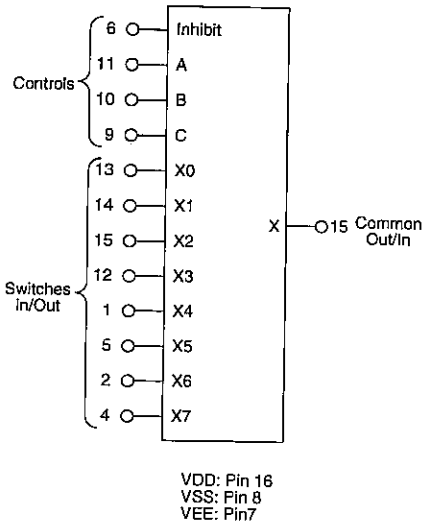


VDD: Pin 16
VSS: Pin 8
VEE: Pin7

IC6: VHiULN2003ANS (ULN2003)

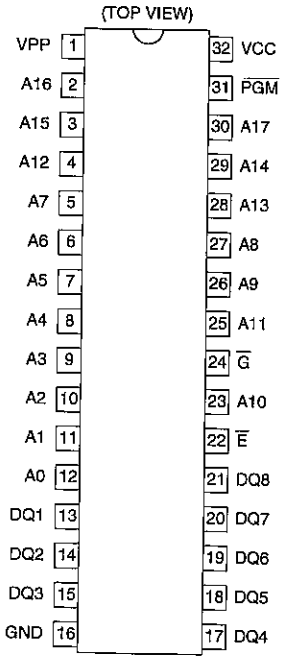


IC101: VHiMC14051DR2 (MC14051B)



IC4: VHi27C02012TI (TMS27C020)

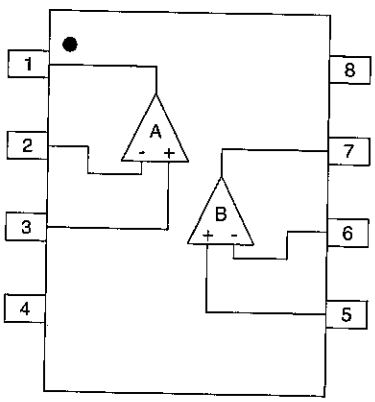
EP-ROM



Pin name	Signal
A0~A17	Address input
$\overline{E}$	Chip enable
$\overline{G}$	Output enable
GND	Ground
NC	No connection
$\overline{PGM}$	Program
DQ1~DQ8	Data output (Program input)
VCC	+5V power
VPP	+12.5V power (*)

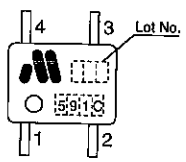
(*) Only in the program mode

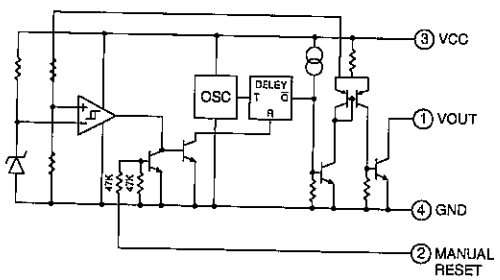
IC110: VHiLMT2903DR2 (LMT2903)



1. A OUTPUT
2. A- INPUT
3. A+ INPUT
4. V-
5. B+ INPUT
6. B- INPUT
7. B OUTPUT
8. V+

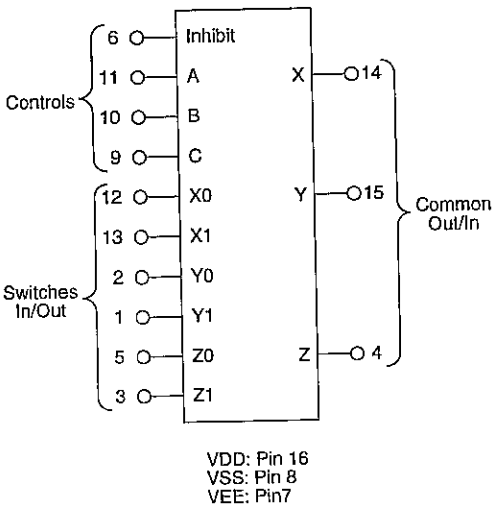
IC109: VHiPST591CMT1 (PST591C)





TEL/LIU P.W.B. UNIT

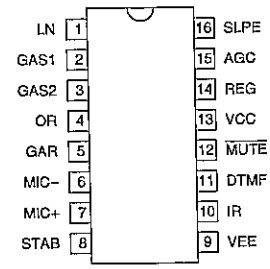
IC102: VHiMC14053DR2 (MC14053B)



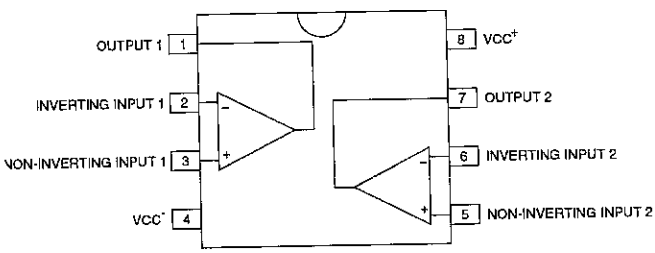
VDD: Pin 16
VSS: Pin 8
VEE: Pin7

IC3: VHiTEA1062A-1 (TEA1062A)

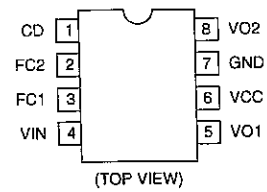
SYMBOL	PIN	DESCRIPTION
LN	1	Positive line terminal
GAS1	2	Gain adjustment: transmitting amplifier
GAS2	3	Gain adjustment: transmitting amplifier
OR	4	Non-inverting output: receiving amplifier
GAR	5	Gain adjustment: receiving amplifier
MIC−	6	Inverting microphone input
MIC+	7	Non-inverting microphone input
STAB	8	Current stabilizer
VEE	9	Negative line terminal
IR	10	Receiving amplifier input
DTMF	11	Dual-tone multi-frequency input
$\overline{MUTE}$	12	Mute input
VCC	13	Positive supply decoupling
REG	14	Voltage regulator decoupling
AGC	15	Automatic gain control input
SLPE	16	Slope (DC resistance) adjustment



IC101•102•103•104: VHiMC1458DTR/ (MC1458)



IC100•105: VHiMC34119DR2 (MC34119)



(TOP VIEW)

MEMO

SHARP PARTS GUIDE

UX-81A
UX-85A
MODEL FO-452

Non Cutter model	Cutter model
UX-81AAT/ABE/ACH/ AES/AIT/ANL/ASE	UX-85AIT FO-452IT

MODEL	COUNTRY
AT	Austria
BE	Belgium
CH	Switzerland
ES	Spain
IT	Italy
NL	Netherlands

CONTENTS

1 Cabinet, etc.

2 Upper cabinet

3 Document guide upper

4 Drive unit

5 Optical unit

6 Packing material & Accessories

7 Control PWB unit

8 TEL-Liu PWB unit

9 Power supply PWB unit

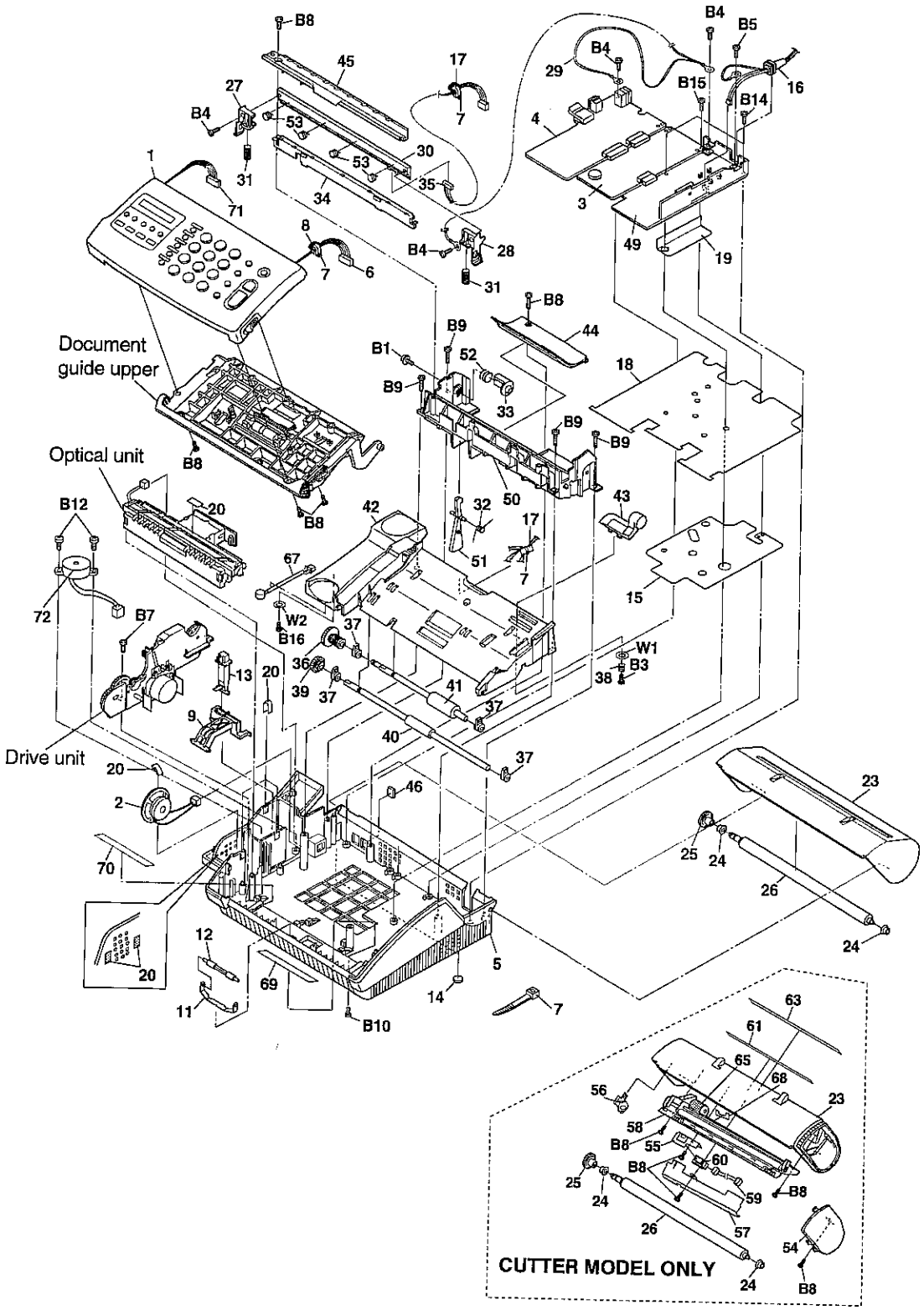
10 CCD PWB unit

50 Hardware parts

■ Index

Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

1 Cabinet, etc.



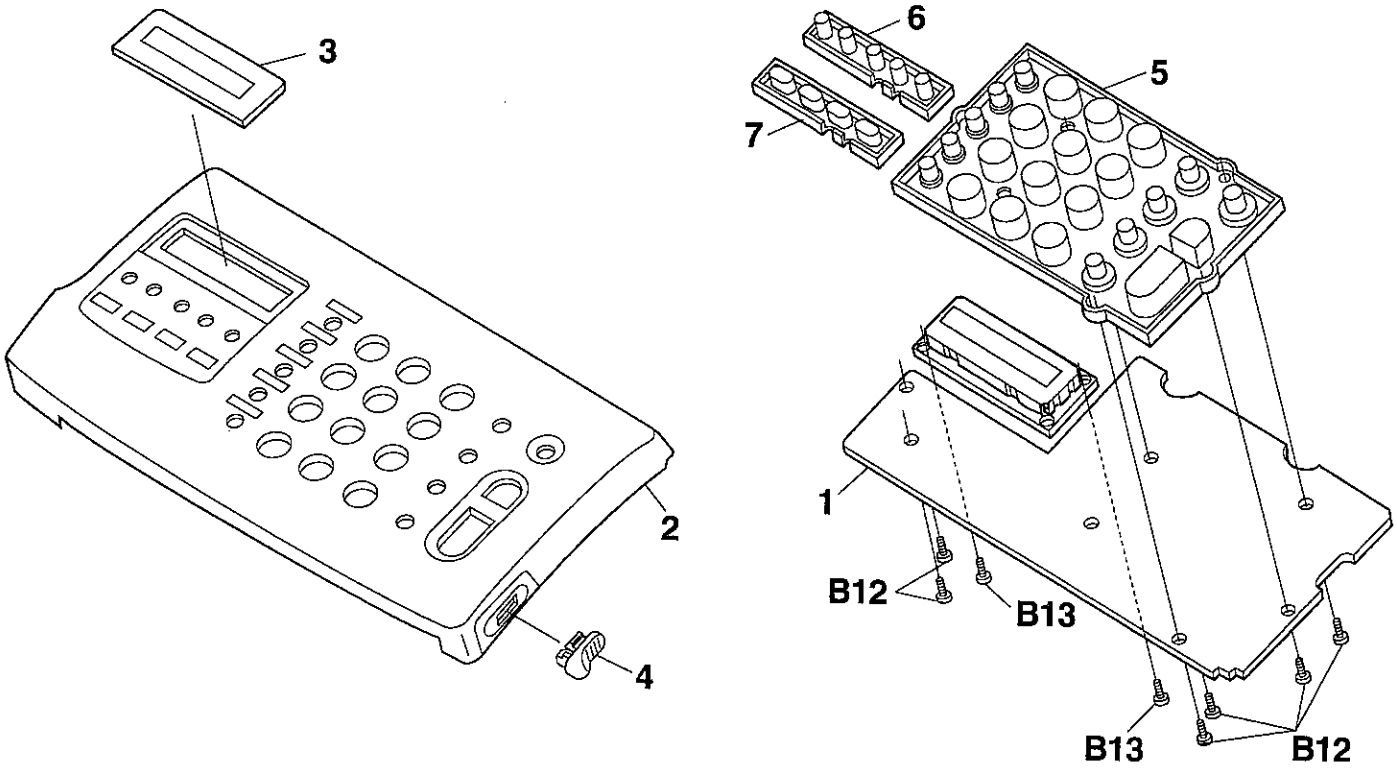
1 Cabinet etc.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	CPNLH2359FF72	BG	N	D	Upper cabinet ass'y	[81AAT/ACH]
	CPNLH2359FF19	BG	N	D	Upper cabinet ass'y	[81ABE/AIT]
	CPNLH2359FF76	BG	N	D	Upper cabinet ass'y	[81AES/ANL/ASE]
	CPNLH2359FF14	BG	N	D	Upper cabinet ass'y	[85AIT]
	CPNLH2359FF85	BG	N	D	Upper cabinet ass'y	[452IT]
2	CCNW-4405FF01	AK		C	Speaker ass'y	
3	CPWBX2858FF01	BV	N	E	Control PWB unit(Without ROM)	[81AAT/ABE/ACH/AES/AIT/ANL/AES]
	CPWBX2858FF02	BV	N	E	Control PWB unit(Without ROM)	[85AIT/452IT]

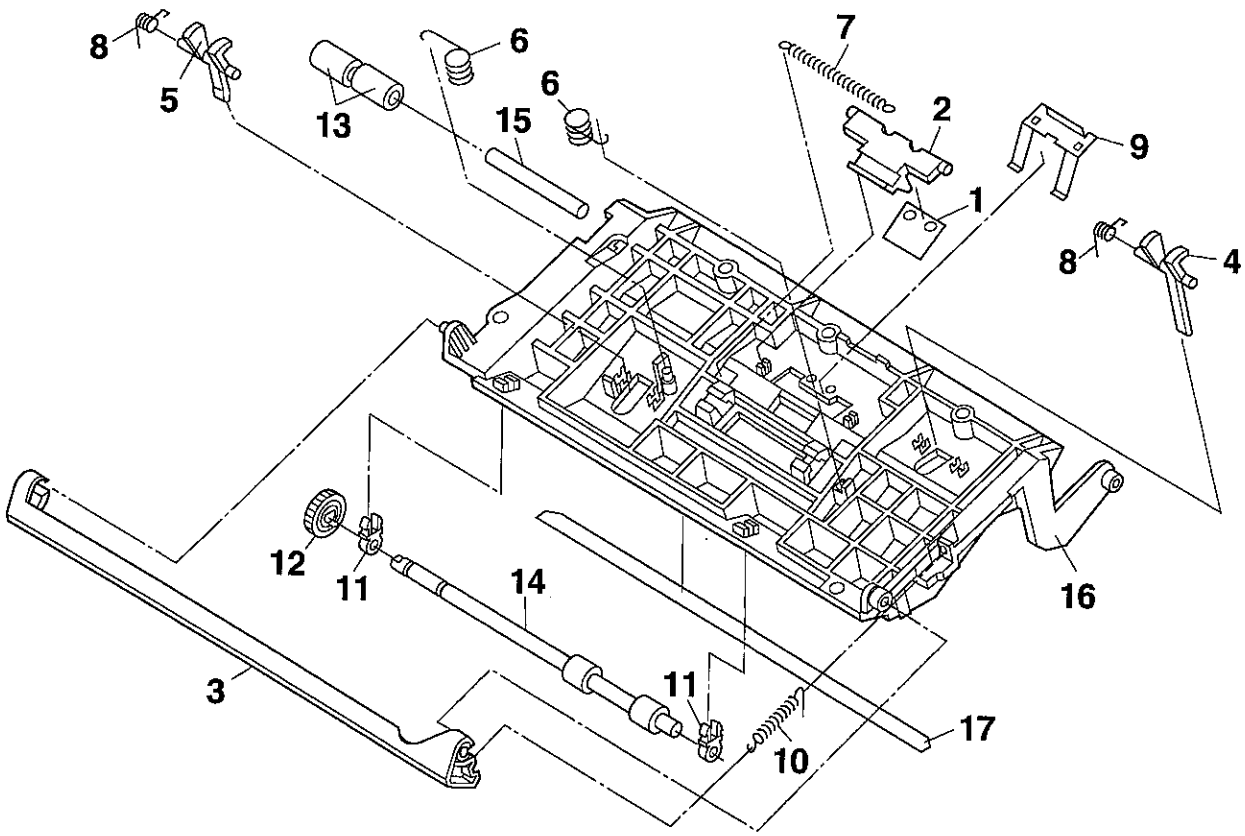
1 Cabinet etc.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
	DCEKL311BFFAT	BH		E	TEL-Liu PWB unit	[81AAT]
	DCEKL311BFFBE	BP		E	TEL-Liu PWB unit	[81ABE]
	DCEKL311BFFCH	BM		E	TEL-Liu PWB unit	[81ACH]
4	DCEKL311BFFES	BE		E	TEL-Liu PWB unit	[81AES]
	DCEKL311BFFIT	BE		E	TEL-Liu PWB unit	[81AIT/85AIT/452IT]
	DCEKL311BFFNL	BN		E	TEL-Liu PWB unit	[81ANL]
	DCEKL311BFF15	BN	N	E	TEL-Liu PWB unit	[81ASE]
	GCABB2260FFSA	AR		D	Lower cabinet	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
5	GCABB2260FFSB	AR		D	Lower cabinet	[452IT]
6	QCNW-4396FFZZ	AM		C	Panel cable	
7	LHLDW1033CE00	AA		C	Band	
⚠ 8	RCORF2064SCZZ	AE		B	Core(TRA31)	
9	MLEVP2186FFSA	AC		C	Hook switch lever A	
11	MSPRP2687XHZZ	AC		C	Pinch pressing spring 2	
12	NROLP2249XHZZ	AE		C	Pinch roller 2	
13	MLEVP2193FFSA	AB		C	Hook switch lever B	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	MLEVP2193FFSB	AC		C	Hook switch lever B	[452IT]
14	PCUSS2084FFZZ	AB		C	Rubber leg	
⚠ 15	PSHEZ3095FFZZ	AW		C	Aluminum sheet	
⚠ 16	QACCE2013FFZZ	AP		B	AC cord ass'y	[81AAT/ABE/AES/AIT/ANL/ASE/85AIT/452IT]
⚠	QACCS2015FFZZ	AP		B	AC cord ass'y	[81ACH]
⚠ 17	RCORF2063SCZZ	AE		B	Core(TRA20)	
18	PSHEZ3181FFZZ	AC		C	Isolation sheet	
19	PSHEZ3182FFZZ	AC		C	Isolation sheet	
20	PSHEZ3130FFZZ	AA		C	Vibration sheet	
23	GCOVA2352FFSA	AL		D	Recording paper cover	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	GCOVA2353FFSB	AL		D	Recording paper cover	[452IT]
24	LBSHP2064FFZZ	AA		C	Platen bearing	
25	NGERH2284FFZZ	AA		C	Platen gear	
26	NROLR2311FFZZ	AN		C	Platen roller	
27	PGIDM2420FFZA	AB		C	Head guide, left	
28	PGIDM2421FFZZ	AB		C	Head guide, right	
29	QCNW-4399FFZZ	AC		C	Head earth cable	
30	RHEDZ2046XHZZ	BT		B	Thermal head	
31	MSPRC2740FFFA	AA		C	Head pressure spring	
32	MSPRD2741FFFJ	AB		C	Paper sensor lever spring	
33	PGIDM2289XHZZ	AB		C	Spool	
34	PGIDM2423FFZZ	AC		C	Paper guide	
35	QCNW-4401FFZZ	AK		C	Head cable	
36	NGERH2283FF01	AA		C	Paper feed roller gear ass'y	
37	LBSHP2063FFZZ	AA		C	Roller bearing	
38	MSPRC2760FFFJ	AA		C	Hopper guide spring	
39	NGERH2282FFZZ	AA		C	Transfer roller 1 gear	
40	NROLR2309FFZZ	AH		C	Transfer roller 1	
41	NROLR2310FFZZ	AH		C	Paper feed roller	
42	PGIDM2418FFSA	BC		C	Document guide lower	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85IT]
	PGIDM2418FFSB	AN		C	Document guide lower	[452IT]
43	PGIDM2419FFSA	AG		C	Hopper guide	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	PGIDM2419FFSB	AB		C	Hopper guide	[452IT]
44	PCOVM2100FFZA	AC		C	ROM cover	
45	PCOVM2106FFSA	AD		C	Head cover	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	PCOVM2106FFSB	AD		C	Head cover	[452IT]
46	PSHEZ3116FFAG	AB		C	Jack sheet	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	PSHEZ3116FFOG	AA		C	Jack sheet	[452IT]
⚠ 49	CDENT2099FFDE	BD		E	Power supply PWB unit	
50	LFRM-2154FFZB	AQ		C	Head frame	
51	MLEVP2187FFZZ	AB		C	Paper sensor lever	
52	MSPRC2737FFFJ	AA		C	Spool spring	[81AAT/ABE/ACH/AES/AIT/ANL/ASE]
	MSPRC2789FFFJ	AA		C	Spool spring	[85AIT/452IT]
53	MSPRC2738FFFJ	AA		C	Head spring	
54	GCOVA2354FFSB	AL		D	Recording paper side cover	[85AIT/452IT]
55	LANGF2801FFZZ	AB		C	Sensor braket	[85AIT/452IT]
56	LHLDR2153FFSA	AC		C	Platen holder	[85AIT]
	LHLDR2153FFSB	AC		C	Platen holder	[452IT]
57	LPLTM2742FFZZ	AD		C	Anti plate	[85AIT/452IT]
58	PCUT-2032FF01	BB		C	Cutter unit	[85AIT/452IT]
59	QCNW-4417FFZZ	AD		C	Sensor cable	[85AIT/452IT]
60	VHPSG113///-1	AP		B	Recording paper sensor	[85AIT]
61	PSHEZ3133FFAG	AD		C	Blind sheet	[452IT]
	PSHEZ3133FFOG	AD		C	Blind sheet	[85AIT]
63	PSHEZ3175FFAG	AB		C	Cover sheet	[452IT]
	PSHEZ3175FFOG	AB		C	Cover sheet	[85AIT/452IT]
65	PSHEZ3144FFZZ	AA		C	Cutter motor sheet	
67	CCNW-4480FF01	AK		C	Mic ass'y	[85AIT/452IT]
68	PSHEZ3177FFZZ	AB		C	Sensor cover	
69	PSHEZ3179FFZZ	AB		C	Back sheet A	
70	PSHEZ3180FFZZ	AB		C	Back sheet B	
71	QCNW-4397FFZZ	AF		C	12key cable	[81ABE/AIT/85AIT/452IT]
72	RCORF6662RCZZ	AK		B	Core	
73	RALMB2022SCZZ	AH		B	Buzzer	[81ABE/AIT/85AIT/452IT]

2 Upper cabinet



3 Document guide upper



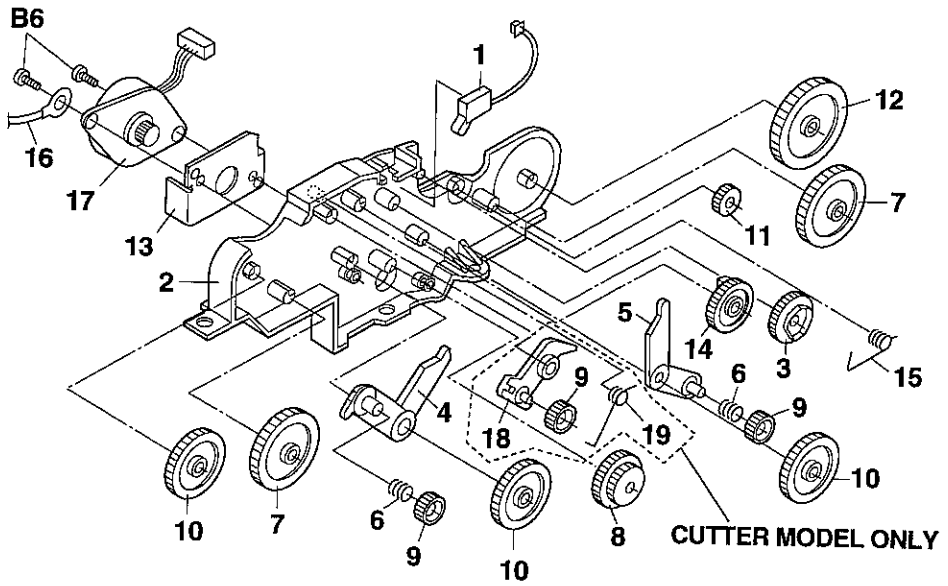
2 Upper cabinet

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	DCEKP423AFFDE	BD		E	Operation panel PWB unit	[81AAT/ACH/AES/ANL/ASE]
	DCEKP423AFFHS	BA		E	Operation panel PWB unit	[81ABE/AIT/85AIT/452IT]
2	GCABA2259FFSU	AQ	N	D	Upper cabinet	[81AAT/ACH]
	GCABA2259FFSP	AS	N	D	Upper cabinet	[81ABE/AES/AIT/ANL/ASE]
	GCABA2259FFSK	AU		D	Upper cabinet	[85AIT]
	GCABA2259FFSY	AQ		D	Upper cabinet	[452IT]
3	HPNLH2359FFZZ	AD		D	Decoration panel	[81AAT]
	HPNLH2359FFZA	AD		D	Decoration panel	[81ABE/AES/AIT/ANL/ASE]
4	JKNBP2067FFSA	AB		C	Release knob	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	JKNBP2067FFSB	AB		C	Release knob	[452IT]
5	QCNTM2005FFZZ	AL		C	Dial key	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	QCNTM2005FFZA	AH		C	Dial key	[452IT]
6	QCNTM2006FFZZ	AD		C	Direct key	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	QCNTM2006FFZA	AD		C	Direct key	[452IT]
7	QCNTM2007FFZZ	AD		C	Ans. mode key	[81AAT/ABE/ACH/AES/AIT/ANL/ASE/85AIT]
	QCNTM2007FFZA	AD		C	Ans. mode key	[452IT]
	(Unit)					[81AAT/ACH]
901	CPNLH2359FF72	BG		D	Upper cabinet ass'y	[81ABE/AIT]
	CPNLH2359FF19	BG		D	Upper cabinet ass'y	[81AES/ANL/ASE]
	CPNLH2359FF76	BG	N	D	Upper cabinet ass'y	[85AIT]
	CPNLH2359FF14	BG	N	D	Upper cabinet ass'y	[452IT]
	CPNLH2359FF85	BG	N	D	Upper cabinet ass'y	

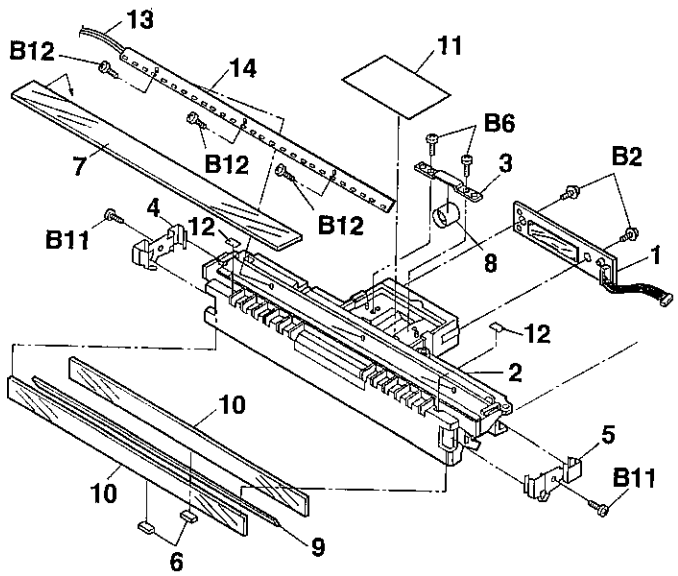
3 Document guide upper

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LPLTG2593XHZZ	AG		C	Separation rubber plate
2	LPLTP2703XHZZ	AC		C	Separation pressing plate
3	MLEVP2185FFZZ	AN		C	Panel lock lever
4	MLEVP2188FFZZ	AA		C	Front sensor lever
5	MLEVP2189FFZZ	AA		C	Document sensor lever
6	MSPRC2692XHZZ	AB		C	Pinch roller spring
7	MSPRC2693XHZZ	AB		C	Paper feed spring
8	MSPRD2733FFFJ	AB		C	Sensor lever return spring
9	MSPRP2688XHZZ	AC		C	Separation pressing spring
10	MSPRT2734FFFJ	AB		C	Cancellation lever spring
11	NBRGP2141XHZZ	AH		C	Transfer bearing 2
12	NGERH2275FFZZ	AA		C	Transfer gear
13	NROLP2300XHZZ	AC		C	Pinch roller 1
14	NROLR2308FFZZ	AG		C	Transfer roller 2
15	NSFTZ2228SCZZ	AC		C	Pinch roller shaft
16	PGIDM2417FFZA	AQ		C	Document guide upper
17	PSHEZ3112XHZZ	AD		C	Face sheet

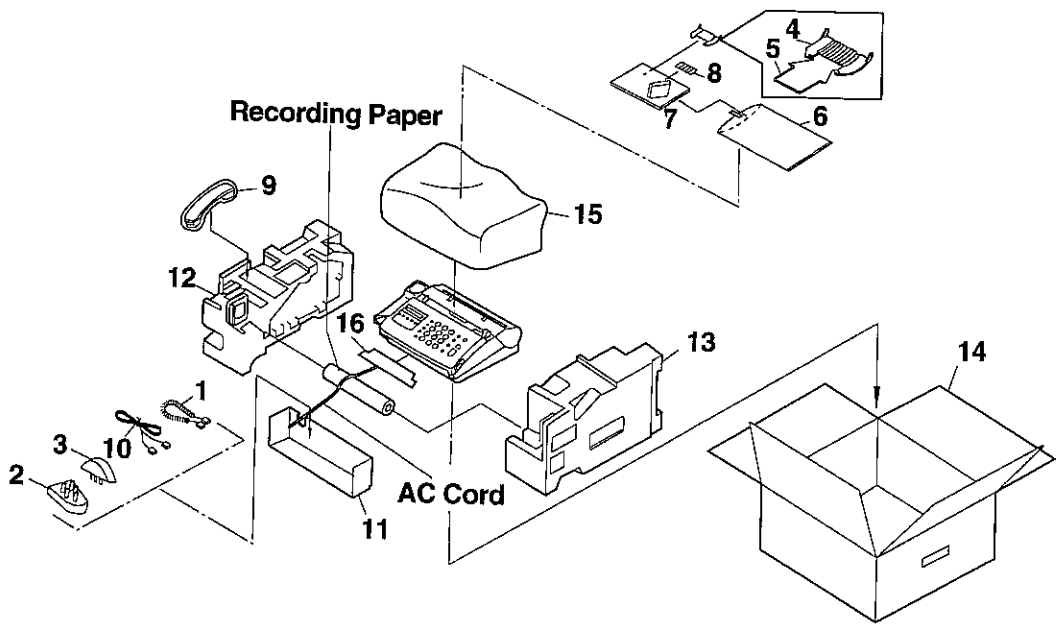
4 Drive unit



5 Optical unit



6 Packing material & Accessories



4 Drive unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CCNW-4402FF01	AE		C	Detection switch ass'y
2	LFRM-2153FFZZ	AF		C	Drive system mounting frame
3	MCAMP2020FFZZ	AA		C	Cam B
4	MLEVP2190FFZZ	AA		C	Planet gear lever A
5	MLEVP2191FFZZ	AA		C	Planet gear lever B
6	MSPRC2735FFFJ	AB		C	Planet gear spring
7	NGERH2276FFZZ	AA		C	Reduction gear A
8	NGERH2277FFZZ	AA		C	Reduction gear B
9	NGERH2278FFZZ	AA		C	Planet gear
10	NGERH2279FFZZ	AA		C	Idler gear A
11	NGERH2280FFZZ	AA		C	Idler gear B
12	NGERH2281FFZZ	AA		C	Idler gear C
13	LPLTM2741FFZZ	AC		C	Heat sink
14	MCAMP2019FFZZ	AA		C	Cam A
15	MSPRD2736FFFJ	AC		C	Cam hold spring
16	QCNW-4398FFZZ	AC		C	Motor earth cable
17	RMOTZ2117FF01	AV		B	Motor [85AIT/452IT]
18	MSPRD2744FFFJ	AA		C	Change spring [85AIT/452IT]
19	MLEVP2194FFZZ	AB		C	Change lever

5 Optical unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	DCEKD475AFFDE	AY		E	CCD PWB unit
2	LFRM-2147XHYA	AV		C	Optical frame
3	MSPRP2512XHZZ	AK		C	Lens holding spring
4	MSPRP2618XHZZ	AD		C	Mirror holding spring 1
5	MSPRP2619XHZZ	AD		C	Mirror holding spring 2
6	PCUSS2089FFZZ	AA		C	Mirror cushion
7	PGLSP2043XHZZ	AK		C	Reader glass
8	PLNS-2043XHZZ	AU		B	Lens
9	PMIR-2061XHZZ	AH		C	Mirror 1
10	PMIR-2062XHZZ	AM		C	Mirror 2
11	PSHEZ2879XHZZ	AK		C	Shading sheet
12	PSHEZ2915XHZZ	AY		C	Blind sheet
13	QCNW-4111XHZZ	AL		C	LED cable
14	VHPSNK08A24-1	AZ		B	LED(SNK08A24)

6 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNW-3976XHAG	AH		C	Handset cord [81AAT]
	QCNW-3976XHOG	AT		C	Handset cord [452IT]
2	QPLGJ2017FFZZ	AM		C	Adapter [81ABE]
3	QPLGJ2016FFZZ	AK		C	Adapter [81AIT/85AIT/452IT]
4	PHOP-2085FFZZ	AC		D	Extention hopper
5	PHOP-2086FFZZ	AB		D	Hopper B
6	SSAKA1004BMZZ	AA		D	Vinyl bag
7	TINSG3648FFZZ	AK	N	D	Operation manual [81AAT/ACH]
	TINSF3650FFZZ	AK	N	D	Operation manual [81ABE]
	TINSH3651FFZZ	AK	N	D	Operation manual [81ANL]
	TINSS3649FFZZ	AK		D	Operation manual [81AES]
	TINSI3654FFZZ	AG		D	Operation manual [81AIT/85AIT/452IT]
	TINSW3652FFZZ	AL		D	Operation manual [81ASE]
8	TLABH3651FFZZ	AG		D	Repid key label [81AAT]
	TLABH3651FFZA	AC		D	Repid key label [452IT]
9	DUNTK307BFFAG	AU		E	Handset [81AAT]
	DUNTK307BFFOG	AV		E	Handset [452IT]
10	QCNW-4646FFZZ	AH		C	Telephone line cord [81ABE]
	QCNW-4416FFZZ	AK		C	Telephone line cord [81AES]
	QCNW-4491FFZZ	AK		C	Telephone line cord [81AIT/85AIT/452IT]
	QCNW-4669FFZZ	AS		C	Telephone line cord [81ANL]
11	SPAKA4803FFZZ	AB		D	Add., AC cord [81AAT]
12	SPAKA4590FFZZ	AF		D	Side pad, left [85AIT/452IT]
	SPAKA4629FFZZ	AG		D	Side pad, left [81AAT]
13	SPAKA4591FFZZ	AF		D	Side pad, right [85AIT/452IT]
	SPAKA4630FFZZ	AG		D	Side pad, right [81AAT/ABE/ACH/AES/AIT/ANL/ASE]
14	SPAKC4990FFZZ	AL	N	D	Packing case [85AIT]
	SPAKC018AFFZZ	AM	N	D	Packing case [451IT]
	SPAKC016AFFZZ	AM		D	Packing case
15	SPAKP3385FFZZ	AB		D	Vinyl cover
16	SPAKA4704FFZZ	AA		C	Protection sheet

7 Control PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	UBATL2033SCZZ	AK		B	Battery(CR2450-H03)	[BAT1]
2	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C1]
3	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C2]
4	VCKYTV1HB472K	AA		C	Capacitor(50WV 4700PF)	[C3]
5	VCKYTV1HB103K	AB		C	Capacitor(25WV 0.01μF)	[C4]
6	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C5]
7	VCEAGA1HW107M	AA		C	Capacitor(50WV 100μF)	[C6]
8	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C7]
9	VCEAGA1CW106M	AA		C	Capacitor(16WV 10μF)	[C8]
10	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C9]
11	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C10]
12	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C11]
13	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C12]
14	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C13]
15	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF)	[C14]
16	VCEAGA1EW226M	AB		C	Capacitor(25WV 22μF)	[C15]
17	VCEAGA1EW226M	AB		C	Capacitor(25WV 22μF)	[C16]
18	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF)	[C17]
19	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF)	[C18]
20	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C19]
21	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C20]
22	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C21]
23	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C22]
24	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C23]
25	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C24]
26	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C25]
27	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[C26]
28	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C27]
29	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C28]
30	VCKYTV1CB224K	AC		C	Capacitor(16WV 0.22μF)	[C29]
31	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C30]
32	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C31]
33	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C32]
34	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C33]
35	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C34]
36	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C35]
37	VCKYTV1HB392K	AA		C	Capacitor(50WV 3900PF)	[C36]
38	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C37]
39	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C38]
40	VCEAGA1CW106M	AA		C	Capacitor(16WV 10μF)	[C39]
41	VCEAGA1CW106M	AA		C	Capacitor(16WV 10μF)	[C40]
42	VCEAGA1CW106M	AA		C	Capacitor(16WV 10μF)	[C41]
43	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C42]
44	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C43]
45	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C44]
46	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C45]
47	VCCSTV1HL101J	AA		C	Capacitor(50WV 100PF)	[C46]
48	VCCSTV1HL101J	AA		C	Capacitor(50WV 100PF)	[C47]
49	VCCCTV1HH470J	AA		C	Capacitor(50WV 47PF)	[C48]
50	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C49]
51	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C50]
52	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C51]
53	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C52]
54	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C53]
55	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C57]
56	VCCSTV1HL101J	AA		C	Capacitor(50WV 100PF)	[C58]
57	VCCSTV1HL101J	AA		C	Capacitor(50WV 100PF)	[C59]
58	VCCSTV1HL391J	AA		C	Capacitor(50WV 390PF)	[C60]
59	VCCSTV1HL391J	AA		C	Capacitor(50W 390PF)	[C61]
60	VCCSTV1HL391J	AA		C	Capacitor(50WV 390PF)	[C62]
61	VCCSTV1HL391J	AA		C	Capacitor(50WV 390PF)	[C63]
62	VCCSTV1HL391L	AA		C	Capacitor(50WV 390PF)	[C64]
63	VCCSTV1HL391J	AA		C	Capacitor(50WV 390PF)	[C65]
64	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C66]
65	VCKYTV1EF104Z	AA		C	Capacitor(50WV 0.1μF)	[C67]
66	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C68]
67	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C69]
68	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C70]
69	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C71]
70	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C72]
71	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C73]
72	VCEAGA1EW226M	AB		C	Capacitor(25WV 22μF)	[C74]
73	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF)	[C75]
74	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C76]
75	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C77]
76	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C78]
77	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C79]
78	VCEAGA1EW475M	AA		C	Capacitor(25WV 4.7μF)	[C80]
79	VCEAGA1CW106M	AA		C	Capacitor(16WV 10μF)	[C81]
80	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C100]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
81	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C101]
82	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C102]
83	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C103]
84	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C104]
85	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C105]
86	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C106]
87	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C107]
88	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C108]
89	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C109]
90	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C110]
91	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C111]
92	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C112]
93	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C113]
94	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C114]
95	VCCCTV1HH8R0D	AA		C	Capacitor(50WV 8.0PF)	[C115]
96	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C116]
97	VCCCTV1HH8R0D	AA		C	Capacitor(50WV 8.0PF)	[C117]
98	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C118]
99	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C119]
100	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C120]
101	VCCCTV1HH300J	AA		C	Capacitor(50WV 30PF)	[C121]
102	VCCCTV1HH300J	AA		C	Capacitor(50WV 30PF)	[C122]
103	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C123]
104	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C124]
105	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C125]
106	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C126]
107	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C127]
108	VCKYTV1EB683K	AC		C	Capacitor(25WV 0.068μF)	[C128]
109	VCCSTV1HL101J	AA		C	Capacitor(50WV 100PF)	[C129]
110	VCKYTV1EB683K	AC		C	Capacitor(25WV 0.068μF)	[C130]
111	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C131]
112	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C132]
113	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C134]
114	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C135]
115	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF)	[C136]
116	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C137]
117	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C138]
118	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C139]
119	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C140]
120	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C142]
121	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C143]
122	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C144]
123	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C145]
124	VCKYTV1EF104Z	AA		C	Capacitor(24WV 0.1μF)	[C146]
125	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C147]
126	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C148]
127	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C149]
128	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C150]
129	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C151] [Cutter model]
130	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C152] [Cutter model]
131	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C153]
132	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C154]
133	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C155]
134	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C156]
135	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C157] [Cutter model]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[C157] [Non cutter model]
136	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C158]
137	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C159]
138	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C160]
139	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C161]
140	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C162]
141	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C163]
142	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C164]
143	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C165] [Cutter model]
144	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C166]
145	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C167]
146	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C168]
147	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C169] [Cutter model]
148	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C170] [Cutter model]
149	VCCCTV1HH180J	AA		C	Capacitor(50WV 18PF)	[C171]
150	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF)	[C172]
151	VCKYTQ1HF104Z	AA		C	Capacitor(25WV 0.1μF)	[C173] [Cutter model]
152	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C174]
153	QCNCM7014SC0G	AB		C	Connector(7pin)	[CNCCD]
154	QCNCM2442SC0B	AB		C	Conector(21pin)	[CNCSW]
155	QCNCM2401SC0F	AB		C	Connector(6pin)	[CNCUT] [Cutter model]
156	QCNCM2499SC1B	AF		C	Connector(12pin)	[CNLIUA]
157	QCNCM2499SC1A	AF		C	Connector(11pin)	[CNLIUB]
158	QCNCM2401SC0C	AB		C	Connector(3pin)	[CNMIC]
159	QCNCM7014SC0F	AB		C	Connector(6pin)(6718)	[CNMT]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
160	QCNCM2482SC1F	AF		C	Connector(16pin) [CNPN]
161	QCNCM7014SC0C	AA		C	Connector(3pin) [CNPS] [Cutter model]
162	QCNCW2500SC0I	AF		C	Connector(9pin) [CNPW]
163	QCNCM7014SC1C	AC		C	Connector(13pin) [CNTH]
164	VHD1SS355//-1	AB		B	Diode(1SS355) [D1]
165	VHD1SS355//-1	AB		B	Diode(1SS355) [D2]
166	VHD1SS355//-1	AB		B	Diode(1SS355) [D100]
167	VHD1SS355//-1	AB		B	Diode(1SS355) [D101]
168	VHD1SS355//-1	AB		B	Diode(1SS355) [D102]
169	VHDDAP202K/-1	AB		B	Diode(DAP202K) [D103]
170	VHD1SS355//-1	AB		B	Diode(1SS355) [D104]
⚠ 171	VHVICPS07//-1	AA		B	Varistor(ICP-S07) [FU100]
172	VHILH28F004SU	BE		B	IC(LH28F004SU) [IC1]
173	VHIM5255CF70L	AW		B	IC(M5M5255KP-70L) [IC2]
174	VHIR96V12SFEV	BN		B	IC(Within IC3/IC5 paer(R96V12/SFE-V)) [IC3]
175	QSOCZ2051SC32	AC		C	IC socket(32pin) [IC4]
	VHI27020FFM0A	BM	N	B	IC ROM [IC4] [81AAT]
	VHI27020FFN0A	BM	N	B	IC ROM [IC4] [81ABE]
	VHI27020FFU0B	BM	N	B	IC(2M EPROM) [IC4] [81ANL]
	VHI27020FFV0D	BM	N	B	IC(2M EPROM) [IC4] [81ASE]
	VHI27020FFP0A	BM	N	B	IC(2M EPROM) [IC4] [81ACH]
	VHI27020FFR0A	BM	N	B	IC(2M EPROM) [IC4] [81AES]
	VHI27020FFT0A	BM	N	B	IC(2M EPROM) [IC4] [81AIT]
	VHI27020FGQ0A	BM	N	B	IC(2M EPROM) [IC4] [85AIT/452IT]
176	VHIR96V12SFEV	BG		B	IC(Within IC3/IC5 pare(R96V12/SFE-V)) [IC5]
177	VHIULM2003AN/	AE		B	IC(ULM2003) [IC6]
178	VHITA7291PV-1	AM		B	(TA7291P) [IC7] [Cutter model]
179	VHIMC14066DR2	AE		B	IC(MC14066) [IC100]
180	VHIMC14051DR2	AE		B	IC(MC14051) [IC101]
181	VHINJM318E/-F	AF		B	IC(NJM318) [IC102]
182	VHIMC1458DTR/	AD		B	IC(MC1458) [IC103]
183	VHIMC14053DR2	AE		B	IC(MC14053) [IC104]
184	VHIMC1458DTR/	AD		B	IC(MC1458) [IC105]
185	VHIMC1458DTR/	AD		B	IC(MC1458) [IC106]
186	VHIMC1458DTR/	AD		B	IC(MC1458) [IC107]
187	VHIMC74HCU04F	AD		B	IC(MC74HCU04) [IC108]
188	VHIPST591CMT1	AE		B	IC(PST591C) [IC109]
189	VHILMT2903DR2	AC		B	IC(LTM2903) [IC110]
190	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L100]
191	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L101]
192	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [L102]
193	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L103]
194	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L104]
195	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L105]
196	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L106]
197	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L107]
198	RCILZ2104SCZZ	AK		C	Coil(MMZ2012S301A) [L108]
199	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L109]
200	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L110]
201	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L111]
202	RCILZ1044CCZZ	AC		C	Coil(NZ3216A) [L112]
203	VSBCR133///-1	AA		B	Transistor(BCR133) [Q1]
204	VSBCR133///-1	AA		B	Transistor(BCR133) [Q2]
205	VSBCR133///-1	AA		B	Transistor(BCR133) [Q3]
206	VSBCR133///-1	AA		B	Transistor(BCR133) [Q4]
207	VSBCR133///-1	AA		B	Transistor(BCR133) [Q100]
208	VS2SC2412KS-1	AB		B	Transistor(2SC2412KS) [Q101]
209	VSBCR133///-1	AA		B	Transistor(BCR133) [Q102]
210	VRS-TS2AD304J	AA		C	Resistor(1/10W 300KΩ ±5%) [R1]
211	VRS-TS2AD304J	AA		C	Resistor(1/10W 300KΩ ±5%) [R2]
212	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R3]
213	VRS-TS2AD302J	AA		C	Resistor(1/10W 3.0KΩ ±5%) [R4]
214	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R5]
215	VRS-TS2AD302J	AA		C	Resistor(1/10W 3.0KΩ ±5%) [R6]
216	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R7]
217	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R8]
218	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R9]
219	VRS-TS2AD754J	AA		C	Resistor(1/10W 750KΩ ±5%) [R10]
220	VRS-TS2AD184J	AA		C	Resistor(1/10W 180KΩ ±5%) [R11]
221	VRS-TS2AD563J	AA		C	Resistor(1/10W 56KΩ ±5%) [R12]
222	VRS-TS2AD394J	AA		C	Resistor(1/10W 390KΩ ±5%) [R13]
223	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%) [R14]
224	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%) [R15]
225	VRS-TS2AD822J	AA		C	Resistor(1/10W 8.2KΩ ±5%) [R16]
226	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%) [R17]
227	VRS-TS2AD123J	AA		C	Resistor(1/10W 12KΩ ±5%) [R18]
228	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R19]
229	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R20]
230	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R21]
231	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R22]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
232	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R23]
233	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R24]
234	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R25]
235	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R26]
236	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R27]
237	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R28]
238	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R29]
239	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R30]
240	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R31]
241	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R32]
242	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R33]
243	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R34]
244	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R35]
245	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R36]
246	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R37]
247	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R38]
248	VRS-TS2AD511J	AA		C	Resistor(1/10W 510Ω ±5%) [R39]
249	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R41]
250	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R42]
251	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%) [R43]
252	VRS-TS2AD513J	AA		C	Resistor(1/10W 51KΩ ±5%) [R44]
253	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R45]
254	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%) [R46]
255	VRS-TS2AD100J	AA		C	Resistor(1/10W 10Ω ±5%) [R47]
256	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R48]
257	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R49]
258	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R50]
259	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R51]
260	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R52] [Cutter model]
261	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R53]
262	VRD-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R54]
263	VRS-TS2AD100J	AA		C	Resistor(1/10W 10Ω ±5%) [R55]
264	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R56]
265	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R57]
266	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R59]
267	VRS-TS2AD820J	AA		C	Resistor(1/10W 82Ω ±5%) [R60]
268	VRS-TS2AD820J	AA		C	Resistor(1/10W 82KΩ ±5%) [R61]
269	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R62]
270	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R63]
271	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R64]
272	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R65]
273	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R66]
274	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R67]
275	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R68]
276	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R69]
277	VRS-TS2AD184J	AA		C	Resistor(1/10W 180KΩ ±5%) [R70]
278	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R71]
279	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R72]
280	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R73]
281	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R74]
282	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R75]
283	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R76] [Cutter model]
284	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R77]
285	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R78] [Cutter model]
286	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R79]
287	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R80]
288	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R81]
289	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R82]
290	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R83]
291	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R84]
292	RR-XZ3010FFZZ	AA		C	Resistor [R85] [Cutter model]
293	VRS-TS2AD106J	AA		C	Resistor(1/10W 10MΩ ±5%) [R86]
294	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R87]
295	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R88]
296	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R89]
297	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R90]
298	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R91]
299	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R92]
300	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R93]
301	VRS-TS2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [R100]
302	VRS-TS2BD121J	AA		C	Resistor(1/8W 120Ω ±5%) [R101]
303	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R102]
304	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R103]
305	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R104]
306	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R105]
307	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R106]
308	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R107] [Cutter model]
309	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R108]
310	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R109]
311	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R110]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
312	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R111]
313	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R112]
314	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R113]
315	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R114]
316	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R115]
317	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R116]
318	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R118]
319	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R119]
320	VRSTS2AD6812F	AA		C	Resistor(1/10W 68.1KΩ ±1%)	[R120]
321	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R121]
322	VRSTS2AD1802F	AA		C	Resistor(1/10W 18.0KΩ ±1%)	[R122]
323	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R123]
324	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R124]
325	VRS-TS2AD103F	AA		C	Resistor(1/10W 10KΩ ±1%)	[R125]
326	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R126]
327	VRS-TS2AD105J	AA		C	Resistor(1/10W 1.0MΩ ±5%)	[R127]
328	VRS-TS2AD820J	AA		C	Resistor(1/10W 82Ω ±5%)	[R128]
329	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R129]
330	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R130]
331	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R131]
332	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R132]
333	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R133]
334	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R134]
335	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R135]
336	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R136]
337	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R137]
338	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R138]
339	VRSTS2AD1373F	AA		C	Resistor(1/10W 137KΩ ±1%)	[R139]
340	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R140]
341	VRS-TS2AD3R0J	AA		C	Resistor(1/10W 3.0Ω ±5%)	[R141]
342	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R142]
343	VRS-TS2AD103F	AA		C	Resistor(1/10W 10KΩ ±1%)	[R143]
344	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R144]
345	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R145]
346	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R146]
347	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R147]
348	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R148]
349	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R149]
350	VRS-TS2AD821J	AA		C	Resistor(1/10W 820Ω ±5%)	[R150]
351	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R151]
352	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R152]
353	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R153]
354	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R154]
355	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R155]
356	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R156]
357	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R157]
358	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R158]
359	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R159]
360	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R160]
361	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R161]
362	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R162]
363	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R163]
364	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R164]
365	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R165]
366	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R166]
367	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R167]
368	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R168]
369	VRS-TS2AD562J	AA		C	Resistor(1/10W 5.6KΩ ±5%)	[R169]
370	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R170]
371	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R171]
372	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R172]
373	VRS-TS2AD103J	AA		C	Resistor(1/10W 10Ω ±5%)	[R173] [Cutter model]
374	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R174] [Cutter model]
375	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R175]
376	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R176]
377	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R177]
378	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R178]
379	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R179]
380	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R180]
381	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R181]
382	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%)	[R183] [Cutter model]
383	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R184] [Cutter model]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R184] [Non cutter model]
384	VRS-TS2AD562J	AA		C	Resistor(1/10W 5.6KΩ ±5%)	[R185]
385	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R186]
386	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R187]
387	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R188]
388	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R189]
389	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R190]
390	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R191]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
391	VRS-TS2AD474J	AA		C	Resistor(1/10W 470KΩ ±5%) [R192]
392	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R193]
393	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R194]
394	RCTSZ2101SCZZ	AK		B	Crystal(36.864MHz) [X1]
395	RCRSZ7008SCZZ	AD		B	Crystal(16.0MHz) [X2]
396	RCRSB0297AFZZ	AD		B	Crystal(32.768KHz) [X3]
397	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1) [ZD1]
398	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1) [ZD2]
399	VHEMPZP4748A1	AA		B	Zener diode [ZD3]
400	VHEHZ11C3//-1	AB		B	Zener diode [ZD4]
	(Unit)				
901	CPWBX2858FF01	BV	N	E	Control PWB unit(Without ROM) [Non cutter model]
	CPWBX2858FF02	BV	N	E	Control PWB unit(Without ROM) [Cutter model]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
⚠ 1	VHVRA501PV6-1	AE	N	B	Varistor(2-Terminal) [AR1] [AT]
2	VHVRA501PV6-1	AE	N	B	Varistor(2-Terminal) [AR2] [AT/IT/ES/SE/BE/NL]
3	VHVRA501PV6-1	AE	N	B	Varistor(2-Terminal) [AR3] [IT/ES/SE/BE/NL]
4	QTANZ2045FFZZ	AA	N	C	Terminal [ARG]
5	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C1] [AT]
	RC-FZ22EA334K	AD		C	Capacitor(250WV 0.33μF) [C1] [BE]
	RC-FZ22EA474K	AH		C	Capacitor(250WV 0.47μF) [C1] [IT/CH/SE/NL]
	RC-FZ22EA224K	AD		C	Capacitor(250WV 0.22μF) [C1] [ES]
6	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C2] [AT]
	VCEAGA1CW107M	AC		C	Capacitor(16WV 100μF) [C2] [ES/IT/CH/SE/NL/BE]
7	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C3] [AT]
	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C3] [ES/IT/CH/SE/BE/NL]
8	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C4] [AT]
	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C4] [ES/IT/CH/SE/BE/NL]
9	VCEAGA1HW225M	AA		C	Capacitor(50WV 2.2μF) [C5] [AT]
	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C5] [ES/IT/CH/SE/BE/NL]
10	VCEAGA1HW225M	AA		C	Capacitor(50WV 2.2μF) [C6] [AT]
	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C6] [ES/IT/CH/SE/BE/NL]
11	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF) [C7] [AT]
	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C7] [ES/IT/CH/SE/BE/NL]
12	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C8] [AT]
	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C8] [ES/IT/CH/SE/BE/NL]
13	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C9] [AT]
	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C9] [ES/IT/CH/SE/BE/NL]
14	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C10] [AT]
	RC-FZ12EA334K	AC	N	C	Capacitor(250WV 0.33μF) [C10] [IT/BE]
15	VCEAGA1HW335M	AB		C	Capacitor(50WV 3.3μF) [C11] [AT]
	VCQYNA1HM224K	AC		C	Capacitor(50WV 0.22μF) [C11] [CH]
16	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF) [C12] [AT]
	VCEAGA2AW474M	AC		C	Capacitor(100WV 0.47μF) [C12] [CH]
	VCEAGA2AW105M	AA		C	Capacitor(100WV 1.0μF) [C12] [ES/BE]
	VCEAGA2AW225M	AC		C	Capacitor(100WV 2.2μF) [C12] [IT/NL]
	VCEAGA1HW334M	AC		C	Capacitor(50WV 0.33μF) [C12] [SE]
17	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF) [C13] [AT]
	VCEAGA1EW106M	AA		C	Capacitor(25WV 10μF) [C13] [IT/BE]
18	VCEAGA1HW104M	AB		C	Capacitor(50WV 0.1μF) [C14] [AT]
	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C14] [BE/IT]
19	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF) [C15] [ES/CH/SE/BE/NL]
20	VCEAGA1AW227M	AB		C	Capacitor(10WV 220μF) [C16] [IT/BE]
21	RC-FZ22EA105K	AE	N	C	Capacitor(250WV 1.0μF) [C17] [AT]
	VCQYNA1HM334K	AD		C	Capacitor(50WV 0.33μF) [C17] [ES/IT/CH/BE/NL]
	VCFYDA1HA824J	AD		C	Capacitor(50WV 0.82μF) [C17] [SE]
22	RC-FZ23EA155K	AE	N	C	Capacitor(250WV 1.5μF) [C18] [AT]
	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF) [C18] [ES/SE/NL]
23	VCQYNA1HM393K	AB		C	Capacitor(50WV 0.039μF) [C19] [CH]
24	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C20] [AT]
	VCEAGA1HW104M	AB		C	Capacitor(50WV 1.0μF) [C20] [ES/IT/CH/SE/BE/NL]
25	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF) [C21] [IT/ES/CH/SE/BE/NL]
26	VCQYNA1HM334K	AD		C	Capacitor(50WV 0.33μF) [C22] [AT]
	VCFYDA1HA824J	AD		C	Capacitor(50WV 0.82μF) [C22] [SE]
27	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF) [C23] [ES/IT/CH/SE/BE/NL]
28	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C24] [ES]
	VCEAGA1AW336M	AA		C	Capacitor(10WV 33μF) [C24] [IT/CH/SE/BE/NL]
29	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C25] [ES/IT/CH/SE/BE]
	VCEAGA0JW107M	AA		C	Capacitor(6.3WV 100μF) [C25] [NL]
30	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C26] [IT/BE]
31	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF) [C27] [ES/IT/CH/SE/BE/NL]
32	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C28] [ES/IT/CH/NL]
33	VCEAGA1HW105M	AB		C	Capacitor(50WV 1.0μF) [C29] [ES]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
33	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF)	[C29] [IT/CH/SE/NL/BE]
34	VCEAGA1HW225M	AA		C	Capacitor(50WV 2.2μF)	[C30] [IT/BE]
35	VCKYTV1HB561K	AA		C	Capacitor(50WV 560PF)	[C100] [ES/IT/CH/SE/BE/NL]
36	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C101] [AT/CH/SE/BE]
	VCKYTV1HB821K	AA		C	Capacitor(50WV 820PF)	[C101] [ES]
	VCKYTV1HB471K	AA		C	Capacitor(50WV 470PF)	[C101] [IT]
37	VCKYTQ1HB183K	AA		C	Capacitor(50WV 0.018μF)	[C102] [AT]
	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C102] [ES/IT/CH/SE/BE/NL]
38	VCKYTQ1HB393K	AA		C	Capacitor(50WV 0.039μF)	[C103] [AT]
	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C103] [ES/IT/CH/SE/BE/NL]
39	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C104] [AT]
	VCCCTV1HH121J	AA		C	Capacitor(50WV 120PF)	[C104] [ES/CH/SE/BE/NL]
	VCKYTV1HB681K	AA		C	Capacitor(50WV 680PF)	[C104] [IT]
40	VCKYTV1HB681K	AA		C	Capacitor(50WV 680PF)	[C105] [AT]
	VCKYTQ1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C105] [BE]
	VCKYTQ1HB333K	AA		C	Capacitor(50WV 0.033μF)	[C105] [CH]
	VCKYTQ1HB563K	AA		C	Capacitor(50WV 0.056μF)	[C105] [SE]
41	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C106] [AT]
	VCKYTV1HB273K	AA		C	Capacitor(50WV 0.027μF)	[C106] [ES/IT/CH/SE/BE/NL]
42	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C107] [AT]
	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C107] [ES/IT/CH/SE/BE/NL]
43	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C108] [AT]
	VCKYTQ1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C108] [IT/BE]
	VCKYTQ1HB273K	AC		C	Capacitor(50WV 0.027μF)	[C108] [SE]
44	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C109] [AT]
	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C109] [ES/CH/NL]
	VCKYTQ1HB223K	AB		C	Capacitor(50WV 0.022μF)	[C109] [IT/BE]
	VCKYTQ1HB333K	AA		C	Capacitor(50WV 0.033μF)	[C109] [SE]
45	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C110] [AT]
	VCCCTV1HH221J	AA		C	Capacitor(50WV 220PF)	[C110] [CH]
	VCKYTV1HB391K	AA		C	Capacitor(50WV 390PF)	[C110] [ES/NL]
	VCKYTV1HB471K	AA		C	Capacitor(50WV 470PF)	[C110] [IT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C110] [SE/BE]
46	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C111] [AT]
	VCKYTQ1HB333K	AA		C	Capacitor(50WV 0.033μF)	[C111] [SE]
47	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C112] [AT]
	VCKYTV1HB821K	AA		C	Capacitor(50WV 820PF)	[C112] [IT/BE]
48	VCKYTV1HB182K	AA		C	Capacitor(50WV 1800PF)	[C113] [AT]
	VCKYTQ1HB683K	AB		C	Capacitor(50WV 0.068μF)	[C113] [CH]
49	VCKYTV1HB221K	AA		C	Capacitor(50WV 220PF)	[C114] [AT]
	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C114] [ES/IT/CH/SE/BE/NL]
50	VCKYTQ1HB104K	AB		C	Capacitor(50WV 0.10μF)	[C115] [AT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C115] [IT/BE]
51	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF)	[C116] [AT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C116] [IT/BE]
52	VCKYTV1HB561K	AA		C	Capacitor(50WV 560PF)	[C117] [AT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C117] [IT/BE]
53	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C118] [AT]
	VCCCTV1HH300J	AA		C	Capacitor(50WV 30PF)	[C118] [IT/BE]
54	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C119] [AT]
	VCCCTV1HH300J	AA		C	Capacitor(50WV 30PF)	[C119] [IT/BE]
55	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C120] [AT]
	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C120] [ES/IT/CH/SE/BE/NL]
56	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C121] [IT/BE]
57	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C122] [AT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C122] [IT/BE]
58	VCKYTV1EB683K	AC		C	Capacitor(25WV 0.068μF)	[C123] [AT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C123] [IT/BE]
59	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[C124] [AT]
	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C124] [IT/BE]
60	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C125] [IT/BE]
61	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C126] [CH/SE/BE/NL]
	VCKYTV1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C126] [ES]
	VCKYTV1HB822K	AA		C	Capacitor(50WV 8200PF)	[C126] [IT]
62	VCKYTV1HB273K	AA		C	Capacitor(50WV 0.027μF)	[C127] [BE]
	VCKYTV1HB223K	AA		C	Capacitor(50WV 0.022μF)	[C127] [CH]
	VCKYTV1HB183K	AA		C	Capacitor(50WV 0.01μF)	[C127] [ES]
	VCKYTV1HB332K	AA		C	Capacitor(50WV 3300PF)	[C127] [IT]
	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C127] [NL/SE]
63	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C128] [CH/SE/BE/NL]
	VCKYTV1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C128] [ES]
	VCKYTV1HB822K	AA		C	Capacitor(50WV 8200PF)	[C128] [IT]
64	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C129] [ES/IT/CH/SE/BE/NL]
65	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C130] [ES/CH/SE/BE/NL]
	VCKYTV1HB562K	AA		C	Capacitor(50WV 5600PF)	[C130] [IT]
66	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C131] [IT/BE]
67	VCKYTQ1HB683K	AB		C	Capacitor(50WV 0.068μF)	[C132] [BE]
68	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C133] [ES/CH/SE/BE/NL]
	VCKYTV1HB562K	AA		C	Capacitor(50WV 5600PF)	[C133] [IT]
69	VCKYTV1HB472K	AA		C	Capacitor(50WV 4700PF)	[C134] [ES/IT/CH/SE/BE/NL]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
70	VCKYTQ1HB104K	AB		C	Capacitor(50WV 0.1μF)	[C135][ES/IT/CH/SE/BE/NL]
71	VCKYTV1HB471K	AA		C	Capacitor(50WV 470PF)	[C137][CH]
	VCKYTV1HB561K	AA		C	Capacitor(50WV 560PF)	[C137][ES/BE]
	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C137][IT]
	VCKYTV1HB821K	AA		C	Capacitor(50WV 820PF)	[C137][NL]
	VCCCTV1HH221J	AA		C	Capacitor(50WV 220PF)	[C137][SE]
72	VCKYTV1HB102J	AA		C	Capacitor(50WV 1000PF)	[C138][SE]
73	VCKYTV1HB182K	AA		C	Capacitor(50WV 1800PF)	[C139][CH]
	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C139][IT/ES/NL]
	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C139][SE/BE]
74	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C140][ES/BE]
	VCKYTV1HB562K	AA		C	Capacitor(50WV 5600PF)	[C140][IT/CH/SE/NL]
75	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C141][ES/IT/CH/SE/NL/BE]
76	VCKYTQ1EB823K	AB		C	Capacitor(50WV 0.082μF)	[C143][BE]
	VCKYTQ1HB563K	AA		C	Capacitor(50WV 0.056μF)	[C143][CH/SE/NL]
	VCKYTQ1HB273K	AC		C	Capacitor(50WV 0.027μF)	[C143][ES]
77	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C144][ES/IT/CH/SE/BE/NL]
78	VCKYTQ1EB224K	AB		C	Capacitor(25WV 0.22μF)	[C145][ES]
79	VCKYTQ1EB334K	AB		C	Capacitor(25WV 0.33μF)	[C147][ES]
	VCKYTQ1EB224K	AB		C	Capacitor(50WV 0.22μF)	[C147][IT/CH/SE/BE/NL]
80	VRS-TS2AD000J	AA		C	Capacitor(1/10W 0Ω ±5%)	[C148][ES/IT/CH/SE/BE/NL]
⚠ 81	RRLYZ3420SCZZ	AR		B	Relay(G6GN-2D)	[CML]
82	QCNCM705BAF06	AA		C	Connector(2Pin)	[CNBZ][IT/BE]
⚠ 83	QJAKZ2047SC0D	AG		C	Jack(40-218A0-04BKA)	[CNHJ]
84	QCNCM7014SC0B	AD		C	Connector(2pin)	[CNLED]
85	QCNCW2500SC1B	AC		C	Connector(12pin)	[CNLIUA]
86	QCNCW2500SC1A	AD		C	Connector(11pin)	[CNLIUB]
⚠ 87	QJAKZ2046SCFB	AH		C	Jack(6pin)	[CNLNJ]
88	QCNCM7014SC0H	AB		C	Connector(8Pin)	[CNPH][IT/BE]
89	QCNCM2401SC0B	AA		C	Connector(2pin)	[CNSP]
90	VHDDSS133//-1	AA		B	Diode(1SS133)	[D1][AT]
	VHDDSS131//-1	AA		B	Diode(1SS131)	[D1][ES/IT/CH/SE/BE/NL]
91	VHDDSS133//-1	AA		B	Diode(1SS133)	[D2]
92	VHDDSS131//-1	AA		B	Diode(1SS131)	[D3][IT/AT/CH/SE/BE/NL]
93	VHDDSS131//-1	AA		B	Diode(1SS131)	[D4][AT]
94	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[D100][ES/CH/SE/NL]
	VHDRB421D//-1	AC		B	Diode(RB421D)	[D100][IT/BE]
95	VHITHS56F//-1	AS		B	IC(THS-56F)	[IC1][ES/IT/CH/SE/BE/NL]
96	VHIKS58008/-1	AU		B	IC(KS58008)	[IC2][IT/BE]
97	VHITEA1062A-1	AR		B	IC(TEA1062A)	[IC3][ES/IT/CH/SE/BE/NL]
98	VHIMC34119DR2	AF		B	IC(MC34119DR2)	[IC100][ES/IT/CH/SE/BE/NL]
99	VHIMC1458DTR/	AD		B	IC(MC1458DTR)	[IC101]
100	VHIMC1458DTR/	AD		B	IC(MC1458DTR)	[IC102][AT]
	VHIMC14053DR2	AE		B	IC(MC14053DR2)	[IC102][ES/IT/CH/SE/BE/NL]
101	VHIMC14066DR2	AE		B	IC(MC14066DR2)	[IC103][AT]
	VHIMC1458DTR/	AD		B	IC(MC1458DTR)	[IC103][ES/IT/CH/SE/BE/NL]
102	VHIMC1458DTR/	AD		B	IC(MC1458DTR)	[IC104][AT]
	VHIMC340121-1	AF		B	IC(MC34012)	[IC104][IT/BE]
103	VHIMC34119DR2	AF		B	IC(MC34119DR2)	[IC105][AT]
104	RFILN2011SCZZ	AC		C	Coil(SBT-0260)	[JP3][SE/CH/NL/ES]
105	RFILN2011SCZZ	AC		C	Coil(SBT-0260)	[JP4][SE/CH/NL/ES]
106	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP101][ES/IT/CH/BE/NL]
⚠ 107	RCILF2125SCZZ	AD		C	Coil(LHL08NB472J)	[L1][CH]
⚠ 108	RFILN2013SCZZ	AG		C	Coil(CHC1307TR580)	[L2]
⚠ 109	RCILF2126SCZZ	AD		C	Coil(FL05RD600ET)	[L3][AT]
⚠	RCILF2127SCZZ	AF		C	Coil(LHL08TB102J)	[L3][SE]
⚠ 110	RCILF2126SCZZ	AD		C	Coil(FL05RD600ET)	[L4][AT]
⚠	RCILL2124SCZZ	AF		C	Coil(CHC6030TR101)	[L4][ES/IT/CH/SE/BE/NL]
⚠ 111	RCILF2126SCZZ	AD		C	Filter(FL05RD600ET)	[L5][AT]
⚠ 112	RCILL2124SCZZ	AF		C	Coil(CHC6030TR101)	[L6][ES/IT/CH/SE/BE/NL]
⚠ 113	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC1][AT]
	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC1][IT/BE]
⚠ 114	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC2][AT]
	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC2][IT/BE]
⚠ 115	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC3]
⚠ 116	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC4][AT]
	VHPRPI-574///	AF		B	Photo interrupter(RPI-574)	[PC4][ES/IT/CH/SE/BE/NL]
117	VHPRPI-574///	AF		B	Photo interrupter(RPI-574)	[PC5][AT]
	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC5][ES/IT/CH/SE/BE/NL]
118	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC6][ES/IT/CH/SE/BE/NL]
119	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC7][ES/IT/CH/SE/BE/NL]
120	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC8][ES/IT/CH/SE/BE/NL]
121	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC9][ES/IT/CH/SE/BE/NL]
122	VSBS108////-1	AE		B	Transistor(BS108)	[Q1][AT]
	VS2SA1807-P-1	AE		B	Transistor(2SA1807)	[Q1][ES/IT/CH/SE/BE/NL]
123	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q100][ES/IT/CH/SE/BE/NL]
124	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q101][AT]
	VSPMBFJ177/-1	AF		B	Transistor(PMBFJ177)	[Q101][IT/BE]
125	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q102]
126	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q103]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
127	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q104] [AT]
	VSDTD123YK/-1	AC		B	Transistor(DTD123Y)	[Q104] [ES/IT/CH/SE/BE/NL]
128	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q105] [AT/IT/BE]
129	VSDTD123YK/-1	AC		B	Transistor(DTD123YK)	[Q106] [AT]
	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q106] [ES/IT/CH/SE/BE/NL]
130	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q107]
131	VSBCR133///-1	AA	N	B	Transistor(BCR133)	[Q108] [AT]
	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q108] [NL]
132	VSBCR133///-1	AA	N	B	Transistor(BCR133)	[Q109] [AT]
	VS2SA1037KR-1	AB		B	Transistor(2SA1037K)	[Q109] [ES/IT/CH/SE/BE/NL]
133	VSBCR133///-1	AA	N	B	Transistor(BCR133)	[Q110] [AT]
	VSBSS123LT1-1	AC		B	Transistor(BSS123LT1)	[Q110] [ES/IT/CH/SE/BE]
	VS2SC4061K/-1	AC		B	Transistor(2SC4061K)	[Q110] [NL]
134	VS2SC4061K/-1	AC		B	Transistor(2SC4061K)	[Q111] [ES/IT/CH/SE/BE/NL]
135	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q112] [ES/IT/CH/SE/BE/NL]
136	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q113] [ES/IT/CH/SE/BE/NL]
137	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q114] [ES/IT/CH/SE/BE/NL]
138	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q115] [IT/BE]
139	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q116] [IT/BE]
140	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q117] [ES/IT/CH/SE/BE/NL]
141	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q118] [ES/IT/CH/SE/BE/NL]
142	VSBCR133///-1	AA		B	Transistor(BCR133)	[Q119] [ES/IT/CH/SE/BE/NL]
143	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q120] [IT/BE]
144	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q121] [IT/BE]
145	VRD-HT2EY243J	AA		C	Resistor(1/4W 24KΩ ±5%)	[R1] [AT]
	VRS-HT3AA123J	AA		C	Resistor(1W 12KΩ ±5%)	[R1] [BE]
	VRS-HT3AA103J	AA		C	Resistor(1W 10KΩ ±5%)	[R1] [IT]
146	VRD-HT2HY223J	AA	N	C	Resistor(1/2W 22KΩ ±5%)	[R2] [AT]
	VRS-HT3AA123J	AA		C	Resistor(1W 12KΩ ±5%)	[R2] [BE]
	VRS-HT3AA223J	AA		C	Resistor(1W 22KΩ ±5%)	[R2] [ES/CH/NL]
	VRS-HT3AA103J	AA		C	Resistor(1W 10KΩ ±5%)	[R2] [IT]
	VRS-HT3AA223J	AA		C	Resistor(1W 22KΩ ±5%)	[R2] [SE]
147	VRD-HT2HY150J	AA	N	C	Resistor(1/2W 15Ω ±5%)	[R3] [AT]
	VRD-HT2HY303J	AA		C	Resistor(1/2W 30KΩ ±5%)	[R3] [BE]
	VRD-HT2HY433J	AA		C	Resistor(1/2W 43KΩ ±5%)	[R3] [ES/IT/CH/SE]
	VRD-HT2HY913J	AB		C	Resistor(1/2W 91KΩ ±5%)	[R3] [NL]
148	VRS-HT3AA300J	AC		C	Resistor(1W 20Ω ±5%)	[R4] [CH]
	VRS-HT3AA430J	AB		C	Resistor(1W 43Ω ±5%)	[R4] [ES]
	VSR-HT3AA620J	AA		C	Resistor(1W 62Ω ±5%)	[R4] [IT]
	VRD-HT2HY200J	AA		C	Resistor(1/2W 20Ω ±5%)	[R4] [NL]
149	VRS-HT3DA750J	AA		C	Resistor(2W 75Ω ±5%)	[R5] [AT]
	VRD-HT2HY200J	AA		C	Resistor(1/2W 20Ω ±5%)	[R5] [CH/SE/BE]
	VRD-HT2HY270J	AA		C	Resistor(1/2W 27Ω ±5%)	[R5] [ES/NL]
	VRD-HT2HY180J	AA		C	Resistor(1/2W 18Ω ±5%)	[R5] [IT]
150	VRD-HT2HY150J	AA		C	Resistor(1/2W 15Ω)	[R6] [AT]
151	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R100] [ES/IT/CH/SE/BE/NL]
152	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R101] [AT]
	VRS-TS2AD302J	AA		C	Resistor(1/10W 3.0KΩ ±5%)	[R101] [ES/IT/CH/SE/BE/NL]
153	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R102]
154	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R103] [AT]
	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R103] [ES]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R103] [IT/CH/SE/BE/NL]
155	VRS-TS2AD152J	AA		C	Resistor(1/10W 1.5KΩ ±5%)	[R104] [AT]
	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R104] [BE]
	VRS-TS2AD124J	AA		C	Resistor(1/10W 120KΩ ±5%)	[R104] [ES/CH/NL]
	VRS-TS2AD623J	AA		C	Resistor(1/10W 62KΩ ±5%)	[R104] [IT/SE]
156	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%)	[R105] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R105] [CH/SE/BE/NL/IT]
	VRS-TS2AD912J	AA		C	Resistor(1/10W 9.1KΩ ±5%)	[R105] [ES]
157	VRS-TS2AD911J	AA		C	Resistor(1/10W 990Ω ±5%)	[R106] [AT]
	VRS-TS2AD243J	AA		C	Resistor(1/10W 24KΩ ±5%)	[R106] [BE]
	VRS-TS2AD473J	AA		C	Resistor(1/10W 47KΩ ±5%)	[R106] [CH]
	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R106] [ES/SE/NL]
	VRS-TS2AD363J	AA		C	Resistor(1/10W 36KΩ ±5%)	[R106] [IT]
158	VRS-TS2AD183J	AA		C	Resistor(1/10W 18KΩ ±5%)	[R107] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R107] [IT/ES/CH/SE/BE/NL]
159	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R108] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R108] [ES/IT/CH/SE/BE/NL]
160	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R109] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R109] [ES/IT/CH/SE/BE/NL]
161	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R110] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R110] [ES/IT/CH/SE/BE/NL]
162	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R111] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R111] [ES/IT/CH/SE/BE/NL]
163	VRS-TS2AD153J	AA		C	Resistor(1/10W 15KΩ ±5%)	[R112] [AT]
	VRS-TS2AD751J	AA		C	Resistor(1/10W 750Ω ±5%)	[R112] [ES/CH/NL]
	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R112] [IT/BE/SE]
164	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R113] [AT]
	VRS-TS2AD911J	AA		C	Resistor(1/10W 910Ω ±5%)	[R113] [BE]
	VRS-TS2AD681J	AA		C	Resistor(1/10W 680Ω ±5%)	[R113] [CH]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
164	VRS-TS2AD751J	AA		C	Resistor(1/10W 750Ω ±5%)	[R113] [ES]
	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R113] [IT]
	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R113] [NL]
	VRS-TS2AD122J	AA		C	Resistor(1/10W 1.2KΩ ±5%)	[R113] [SE]
165	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R114] [AT]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R114] [ES/CH/NL]
	VRS-TS2AD510J	AA		C	Resistor(1/10W 51Ω ±5%)	[R114] [IT/SE/BE]
166	VRS-TS2AD223J	AA		C	Resister(1/10W 22KΩ ±5%)	[R115] [AT]
	VRS-TS2AD391J	AA		C	Resistor(1/10W 390Ω ±5%)	[R115] [BE]
	VRS-TS2AD511J	AA		C	Resistor(1/10W 510Ω ±5%)	[R115] [ES/CH/NL]
	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%)	[R115] [IT]
	VRS-TS2AD241J	AA		C	Resistor(1/10W 240Ω ±5%)	[R115] [SE]
167	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R116] [AT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R116] [ES/CH/SE/BE/NL]
	VRS-TS2AD183J	AA		C	Resistor(1/10W 18KΩ ±5%)	[R116] [IT]
168	VRS-TS2AD563J	AA		C	Resistor(1/10W 56KΩ ±5%)	[R117] [AT]
	VRS-TS2AD913J	AA		C	Resistor(1/10W 91KΩ ±5%)	[R117] [CH]
	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%)	[R117] [ES/BE/NL]
	VRS-TS2AD623J	AA		C	Resistor(1/10W 62KΩ ±5%)	[R117] [IT]
	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R117] [SE]
169	VRS-TS2AD113J	AA		C	Resistor(1/10W 11KΩ ±1%)	[R118] [AT]
	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R118] [IT/BE]
170	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R119] [AT]
	VRS-TS2AD164J	AA		C	Resistor(1/10W 160KΩ ±5%)	[R119] [IT/BE]
171	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R120] [AT]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R120] [ES/IT/CH/SE/BE/NL]
172	VRS-TS2AD752J	AA		C	Resistor(1/10W 7.5KΩ ±5%)	[R121] [AT]
173	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R122] [AT]
174	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R123] [AT]
	VRS-TS2AD391J	AA		C	Resistor(1/10W 390Ω ±5%)	[R123] [CH]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R123] [IT/ES/SE/BE/NL]
175	VRS-TS2AD822J	AA		C	Resistor(1/10W 8.2KΩ ±5%)	[R124] [AT]
	VRS-TS2AD392J	AA		C	Resistor(1/10W 3.9KΩ ±5%)	[R124] [IT/BE]
176	VRS-TS2AD134J	AA		C	Resistor(1/10W 130KΩ ±5%)	[R125] [AT]
	VRS-TS2AD103J	AA		C	Resistor(1/10W 3.9KΩ ±5%)	[R125] [ES/IT/CH/SE/BE/NL]
177	VRS-TS2AD301J	AA		C	Resistor(1/10W 300Ω ±5%)	[R126] [AT]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R126] [BE]
178	VRS-TS2AD302J	AA		C	Resistor(1/10W 3.0KΩ ±5%)	[R127] [AT]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R127] [IT]
179	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R128] [AT]
	VRS-TS2AD100J	AA		C	Resistor(1/10W 10Ω ±5%)	[R128] [CH]
180	VRS-TS2AD222J	AA		C	Resistor(1/10W 2.2KΩ ±5%)	[R129] [AT]
	VRS-TS2AD474J	AA		C	Resistor(1/10W 470KΩ ±5%)	[R129] [IT/BE]
181	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R130] [AT]
	VRS-TS2AD222J	AA		C	Resistor(1/10W 2.2KΩ ±5%)	[R130] [IT/BE]
182	VRS-TS2AD301J	AA		C	Resistor(1/10W 300Ω ±5%)	[R131] [AT]
	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R131] [IT/BE]
183	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R132] [AT]
	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R132] [ES/IT/CH/SE/BE/NL]
184	VRS-TS2AD511J	AA		C	Resistor(1/10W 510Ω ±5%)	[R133] [AT]
	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%)	[R133] [IT/BE]
185	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R134] [AT]
	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R134] [ES/IT/CH/SE/BE/NL]
186	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R135] [AT]
	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R135] [ES/IT/CH/SE/BE/NL]
187	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R136] [AT]
	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%)	[R136] [CH]
	VRS-TS2AD224J	AA		C	Resistor(1/10W 220KΩ ±5%)	[R136] [IT/ES/SE/BE/NL]
188	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R137]
189	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R138] [AT]
190	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R139] [AT]
	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R139] [ES/IT/CH/SE/BE/NL]
191	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R140] [AT]
	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R140] [ES/IT/CH/SE/BE/NL]
192	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R141] [AT]
	VRS-TS2AD122J	AA		C	Resistor(1/10W 1.2KΩ ±5%)	[R141] [ES/IT/CH/SE/BE/NL]
193	VRS-TS2AD133J	AA		C	Resistor(1/10W 13KΩ ±5%)	[R142] [AT/NL]
	VRS-TS2AD183J	AA		C	Resistor(1/10W 18KΩ ±5%)	[R142] [BE]
	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R142] [CH]
	VRS-TS2AD392J	AA		C	Resistor(1/10W 3.9KΩ ±5%)	[R142] [ES]
	VRS-TS2AD123J	AA		C	Resistor(1/10W 12KΩ ±5%)	[R142] [IT]
	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R142] [SE]
194	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R143] [AT]
	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R143] [BE]
	VRS-TS2AD823J	AA		C	Resistor(1/10W 82KΩ ±5%)	[R143] [CH]
	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R143] [ES]
	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R143] [IT]
	VRS-TS2AD433J	AA		C	Resistor(1/10W 43KΩ ±5%)	[R143] [NL]
	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%)	[R143] [SE]
195	VRS-TS2AD470J	AA		C	Resistor(1/10W 300Ω ±5%)	[R144] [AT]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
195	VRSTS2AD3651F	AA		C	Resistor(1/10W 3.65KΩ ±5%) [R144][ES/IT/CH/SE/BE/NL]
196	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R145] [AT]
	VRS-TS2AD392J	AA		C	Resistor(1/10W 3.9KΩ ±5%) [R145] [BE]
	VRS-TS2AD362J	AA		C	Resistor(1/10W 3.6KΩ ±5%) [R145] [IT]
197	VRS-TS2AD182J	AA		C	Resistor(1/10W 1.8KΩ ±5%) [R146] [IT/BE]
198	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R147] [ES/IT/CH/SE/BE]
	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R147] [NL]
199	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R148] [ES/IT/CH/SE/BE/NL]
200	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R149] [ES/IT/CH/SE/BE]
201	VRS-TS2AD150J	AA		C	Resistor(1/10W 15Ω ±5%) [R150] [ES/IT/CH/SE/BE]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R150] [NL]
202	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R151] [ES/IT/CH/SE/BE/NL]
203	VRS-TS2AD150J	AA		C	Resistor(1/10W 15Ω ±5%) [R152] [ES/IT/CH/SE/BE]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R152] [NL]
204	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R153] [IT/BE]
205	VRS-TS2AD432J	AA		C	Resistor(1/10W 4.3KΩ ±5%) [R154] [CH/BE]
	VRS-TS2AD512J	AA		C	Resistor(1/10W 5.1KΩ ±5%) [R154] [ES]
	VRS-TS2AD512J	AA		C	Resistor(1/10W 5.1KΩ ±5%) [R154] [IT/NL]
	VRS-TS2AD362J	AA		C	Resistor(1/10W 3.6KΩ ±5%) [R154] [SE]
206	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R155] [IT/BE]
207	VRS-TS2AD124J	AA		C	Resistor(1/10W 120KΩ ±5%) [R156] [ES/IT/CH/SE/BE/NL]
208	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R157] [ES/IT/CH/SE/BE/NL]
209	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R158] [ES/IT/CH/SE/BE/NL]
210	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R159] [ES/IT/CH/SE/BE/NL]
211	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R160] [ES/IT/CH/SE/BE/NL]
212	VRS-TS2AD393J	AA		C	Resistor(1/10W 39KΩ ±5%) [R161] [BE]
	VRS-TS2AD183J	AA		C	Resistor(1/10W 18KΩ ±5%) [R161] [CH]
	VRS-TS2AD243J	AA		C	Resistor(1/10W 24KΩ ±5%) [R161] [ES]
	VRS-TS2AD363J	AA		C	Resistor(1/10W 36KΩ ±5%) [R161] [IT]
	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%) [R161] [SE/NL]
213	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%) [R162] [ES/SE/BE/NL]
214	VRS-TS2AD114J	AA		C	Resistor(1/10W 110KΩ ±5%) [R163] [BE]
	VRS-TS2AD134J	AA		C	Resistor(1/10W 130KΩ ±5%) [R163] [ES]
	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%) [R163] [IT]
	VRS-TS2AD473J	AA		C	Resistor(1/10W 47KΩ ±5%) [R163] [SE]
215	VRS-TS2AD681J	AA		C	Resistor(1/10W 680Ω ±5%) [R164] [ES/CH/SE/BE/NL]
	VRS-TS2AD431J	AA		C	Resistor(1/10W 430Ω ±5%) [R164] [IT]
216	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%) [R165] [ES/IT/CH/SE/BE/NL]
217	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%) [R166] [ES/IT/CH/SE/BE/NL]
218	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R167] [ES/CH/SE/NL]
	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R167] [IT/BE]
219	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%) [R168] [ES/IT/CH/SE/BE/NL]
220	VRS-TS2AD134J	AA		C	Resistor(1/10W 130KΩ ±5%) [R169] [ES/IT/CH/SE/BE/NL]
221	VRS-TS2AD362J	AA		C	Resistor(1/10W 3.6KΩ ±5%) [R170] [BE]
	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%) [R170] [ES]
	VRS-TS2AD392J	AA		C	Resistor(1/10W 3.9KΩ ±5%) [R170] [IT/CH/SE/NL]
222	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R171] [ES/CH/SE/NL]
	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R171] [IT/BE]
223	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R172] [BE]
	VRS-TS2AD302J	AA		C	Resistor(1/10W 3.0KΩ ±5%) [R172] [CH]
	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R172] [ES]
	VRS-TS2AD431J	AA		C	Resistor(1/10W 430Ω ±5%) [R172] [IT]
	VRS-TS2AD241J	AA		C	Resistor(1/10W 240Ω ±5%) [R172] [NL]
	VRS-TS2AD122J	AA		C	Resistor(1/10W 1.2KΩ ±5%) [R172] [SE]
224	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R173] [IT/BE]
225	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R174] [ES/IT/CH/SE/BE/NL]
226	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R175] [ES/IT/CH/SE/BE/NL]
227	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R176] [ES/IT/CH/SE/BE/NL]
228	VRS-TS2AD301J	AA		C	Resistor(1/10W 300Ω ±5%) [R177] [BE]
	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R177] [CH]
	VRS-TS2AD241J	AA		C	Resistor(1/10W 240Ω ±5%) [R177] [ES/NL]
	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R177] [IT]
	VRS-TS2AD391J	AA		C	Resistor(1/10W 390KΩ ±5%) [R177] [SE]
229	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R178] [ES/IT/CH/SE/BE/NL]
230	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R179] [IT/BE]
231	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R180] [BE]
	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R180] [IT]
232	VRS-TS2AD205J	00		C	Resistor(1/10W 2MΩ ±5%) [R181] [BE]
	VRS-TS2AD204J	AA		C	Resistor(1/10W 200KΩ ±5%) [R181] [IT]
233	VHDS1ZB60//-1	AC		B	Diode(S1ZB60) [REC1] [AT/IT/CH/NL]
	VHD0R5G4B42-1	AF		B	Diode(0RSG4B42) [REC1] [ES/SE/BE]
234	QSW-Z2206SCZZ	AH		B	Hook switch(SPPY11-BM) [SW1] [AT]
	QSW-Z2214SCZZ	AH		B	Hook switch(SPPY12-A) [SW1] [ES/IT/CH/SE/BE/NL]
⚠ 235	RTRNI2142XHZZ	AR		B	Transformer(I2142) [T1] [AT]
⚠	RTRNZ2140XHZZ	AN		B	Transformer(Z2140) [T1] [ES/IT/CH/SE/BE/NL]
⚠ 236	RTRNI2142XHZZ	AR		B	Transformer(I2142) [T2] [ES/IT/CH/SE/BE/NL]
237	VHVSIOVS05K60	AH		B	Varistor(SIOV-S05K60T) [VA1] [ES/IT/CH/SE/BE/NL]
238	VHVSIOS14K150	AH		B	Varistor(SIOV-S14K150) [VA2] [CH]
239	RCRM-0091AFZZ	AE		B	Crystal(3.58MHz) [X1] [IT/BE]
240	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1) [ZD1] [AT]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
240	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD1] [ES/IT/CH/SE/BE/NL]
241	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD2] [AT]
	VHEBZX79B2V4A	AB		B	Zener diode(BZX79B2V4)	[ZD2] [ES]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD2] [IT/CH/SE/NL/BE]
242	VHEBZX79B2V4A	AB	N	B	Zener diode(BZX79B2V4)	[ZD3] [AT/ES]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD3] [IT/CH/SE/BE/NL]
243	VHEBZX79B2V4A	AB	N	B	Zener diode(BZX79B2V4)	[ZD4] [AT]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD4] [ES/IT/CH/SE/BE/NL]
244	VHEBZX79B4V7A	AA	N	B	Zener diode(BZX794V7)	[ZD5] [AT]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD5] [ES/IT/CH/SE/BE/NL]
245	VHEBZX79B4V7A	AA	N	B	Zener diode(BZX79B4V7)	[ZD6] [AT]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD6] [ES/IT/CH/SE/BE/NL]
246	VHEBZX79B20/A	AA	N	B	Zener diode(BZX79B20V)	[ZD7] [AT]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD7] [ES/IT/CH/SE/BE/NL]
247	VHEBZ79XB6V8A	AA	N	B	Zener diode(BZX79B6V8)	[ZD8] [AT]
	VHEHZS3B1//-1	AC		B	Zener diode(HZS3B1)	[ZD8] [ES/IT/CH/SE/BE/NL]
248	VHEBZX79B30/A	AC		B	Zener diode(BZX79B30V)	[ZD9] [AT/ES/NL]
	VHEBZX79B18/A	AA		B	Zener diode(BZX79B18V)	[ZD9] [BE]
	VHEBZX79B20/A	AC		B	Zener diode(BZX79B20V)	[ZD9] [CH/SE]
	VHEBZX79B33/A	AA		B	Zener diode(BZX79B33V)	[ZD9] [IT]
249	VHEBZX79B5V1A	AA	N	B	Zener diode(BZX79B5V1)	[ZD10] [AT]
	VHEBZX79B2V4A	AB		B	Zener diode(BZX79B2V4)	[ZD10] [ES]
	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD10] [NL]
250	VHEBZX79B2V4A	AB		B	Zener diode(BZX79B2V4)	[ZD11] [ES]
	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD11] [NL]
	VHEBZX79B2V7A	AC		B	Zener diode(BZX9B2V7)	[ZD11] [SE]
251	VHE1ZC15///-1	AC		B	Zener diode(1ZC15)	[ZD12] [ES/IT/CH/SE/BE/NL]
252	VHEBZX79B5V6A	AA		B	Zener diode(BZX79B5V6)	[ZD13] [CH/SE/BE/NL]
	VHEBZX79B4V7A	AA		B	Zener diode(BZX79B4V7)	[ZD13] [ES]
	VHEBZX79B5V1A	AA		B	Zener diode(BZX79B5V1)	[ZD13] [IT]
253	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD14] [CH]
	VHEBZX79B3V0A	AA		B	Zener diode(BZX79B3V0)	[ZD14] [ES/SE/BE/NL]
	VHEBZX79B2V4A	AB		B	Zener diode(BZX79B2V4)	[ZD14] [IT]
254	VHEBZX79B10/A	AC		B	Zener diode(BZX79B10V)	[ZD15] [ES/IT/CH/SE/BE/NL]
	(Unit)					[AT]
901	DCEKL311BFFAT	BH		E	TEL-Liu PWB unit	[IT]
	DCEKL311BFFIT	BP		E	TEL-Liu PWB unit	[ES]
	DCEKL311BFFES	BE		E	TEL-Liu PWB unit	[BE]
	DCEKL311BFFBE	BP		E	TEL-Liu PWB unit	[CH]
	DCEKL311BFFCH	BM		E	TEL-Liu PWB unit	[NL]
	DCEKL311BFFNL	BN		E	TEL-Liu PWB unit	[SE]
	DCEKL311BFF15	BN	N	E	TEL-Liu PWB unit	

9 Power supply PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	QCNCM0672FCZZ	AB		C	Connector(3Pin)	[A]
2	RC-FZ0070BMZZ	AD		C	Capacitor	[C702]
3	RC-KZ0156CEZZ	AD		C	Capacitor	[C703]
4	RC-KZ0156CEZZ	AD		C	Capacitor	[C704]
5	RC-KZ0029CEZZ	AC		C	Capacitor	[C705]
6	RC-EZ0117BMZZ	AP		C	Capacitor(385WV 100µF)	[C706]
7	RC-FZ9153BMNJ	AB		C	Capacitor	[C707]
8	RC-FZ9683BMNJ	AB		C	Capacitor	[C708]
9	RC-FZ9332BMNJ	AA		C	Capacitor	[C709]
10	VCKZPA1HB102K	AA		C	Capacitor(50WV 1000PF)	[C710]
11	VCEAGA1CW108M	AE		C	Capacitor(16WV 1000µF)	[C714]
12	VCEAGA1CW107M	AC		C	Capacitor(16WV 100µF)	[C716]
13	RC-KZ0156CEZZ	AD		C	Capacitor	[C717]
14	RC-KZ0035CEZZ	AC		C	Capacitor	[C718]
15	VCEAGA1HW477M	AE		C	Capacitor(50WV 470µF)	[C719]
16	VCCSPA1HL151J	AA		C	Capacitor(50WV 150PF)	[C740]
17	VCEAGA1HW477M	AE		C	Capacitor(50WV 470µF)	[C744]
18	VCEAGA1CW107M	AC		C	Capacitor(16WV 100µF)	[C745]
19	RC-KZ0193BMZZ	AD		C	Capacitor	[C746]
20	QCNCM886JAFZZ	AD		C	Connector(9Pin)	[CNPW]
21	RH-DX0532BMZZ	AD		B	Diode(1N4005)	[D701]
22	RH-DX0532BMZZ	AD		B	Diode(1N4005)	[D702]
23	RH-DX0532BMZZ	AD		B	Diode(1N4005)	[D703]
24	RH-DX0532BMZZ	AD		B	Diode(1N4005)	[D704]
25	RH-DX0539BMZZ	AC		B	Diode(BYT52)	[D705]
26	RH-DX0045BMZZ	AA		B	Diode(1N4148)	[D706]
27	RH-EX0410BMZZ	AB		B	Diode(BZX79C6V2)	[D707]
28	RH-EX0612BMZZ	AB		B	Diode(BZY97C27)	[D708]
29	RH-DX0533BMZZ	AD		B	Diode(1N5819)	[D712]
30	RH-EX0408BMZZ	AB		B	Diode(BZX79C5V1)	[D715]

9 Power supply PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
31	RH-EX0410BMZZ	AB		B	Diode(BZX79C6V2)	[D717]
32	RH-EX0425BMZZ	AA		B	Diode(BZX79C27V)	[D718]
33	RH-DX0296BMZZ	AH		B	Diode(B72M)	[D719]
34	RH-DX0045BMZZ	AA		B	Diode(1N4148)	[D720]
35	RH-EX0400BMZZ	AB		B	Diode(BZX79C2V4)	[D721]
36	RH-DX0045BMZZ	AA		B	Diode(1N4148)	[D741]
37	QFS-C2050BMZZ	AC		A	Fuse(2A)	[F701]
38	QFS-C2050BMZZ	AC		A	Fuse(2A)	[F702]
39	RBLN-0037CEZZ	AB		C	Ferrite core	[FB701]
40	RBLN-0037CEZZ	AB		C	Ferrite core	[FB702]
41	QFSHD1010CEZZ	AB		C	Fuse supporter	[FS701]
42	QFSHD1010CEZZ	AB		C	Fuse supporter	[FS702]
43	RH-FX0101BMZZ	AE		B	IC(MOC8101)	[IC701]
44	RR-XZ0202BMZZ	AA		C	Resistor	[J6]
45	RCILF0113BMZZ	AG		C	Filter	[L701]
46	RCILP0110CEZZ	AD		C	Filter	[L702]
47	RCILP0110CEZZ	AD		C	Filter	[L703]
48	RH-TX0128BMZZ	AM		B	Transistor(STP3AN80FI)	[Q701]
49	RH-TX0130BMZZ	AB		B	Transistor(BC338-40)	[Q702]
50	RH-TX0130BMZZ	AB		B	Transistor(BC338-40)	[Q703]
51	RH-TX0106BMZZ	AB		B	Transistor(BC547)	[Q705]
52	VS2SD1913S/1E	AD		B	Transistor(2SD1913)	[Q708]
53	VRW-KP3HC5R6K	AC		C	Resistor	[R1]
54	VRD-RA2HD224J	AA		C	Resistor(1/2W 220KΩ ±5%)	[R702]
55	VRD-RA2HD224J	AA		C	Resistor(1/2W 220KΩ ±5%)	[R703]
56	VRD-RA2HD334J	AA		C	Resistor(1/2W 330KΩ ±5%)	[R704]
57	VRD-RA2HD564J	AC		C	Resistor(1/2W 560KΩ ±5%)	[R705]
58	VRN-VV3ABR27J	AA		C	Resistor(1W 27Ω ±5%)	[R706]
59	VRD-RA2BE221J	AA		C	Resistor(1/8W 220Ω ±5%)	[R707]
60	VRD-RA2HD561J	AA		C	Resistor(1/2W 560Ω ±5%)	[R708]
61	VRD-RA2EE680J	AA		C	Resistor(1/4W 68Ω ±5%)	[R709]
62	VRD-RA2HD102J	AA		C	Resistor(1/2W 1.0KΩ ±5%)	[R710]
63	VRD-RA2HD152J	AA		C	Resistor(1/2W 1.5KΩ ±5%)	[R712]
64	VRD-RA2BE222J	AA		C	Resistor(1/8W 2.2KΩ ±5%)	[R713]
65	VRD-RA2HD471J	AA		C	Resistor(1/2W 470Ω ±5%)	[R714]
66	VRD-RA2BE272J	AA		C	Resistor(1/8W 2.7KΩ ±5%)	[R715]
67	VRD-RA2BE682J	AA		C	Resistor(1/8W 6.8KΩ ±5%)	[R716]
68	VRD-RA2HD561J	AA		C	Resistor(1/2W 560Ω ±5%)	[R717]
69	VRD-RA2BE223J	AA		C	Resistor(1/8W 22KΩ ±5%)	[R720]
70	VRD-RA2HD272J	AA		C	Resistor(1/2W 2.7KΩ ±5%)	[R721]
71	VRD-RA2HD272J	AA		C	Resistor(1/2W 2.7KΩ ±5%)	[R722]
72	VRD-RA2HD272J	AA		C	Resistor(1/2W 2.7KΩ ±5%)	[R723]
73	RVR-M4157BMZZ	AB		C	Resistor	[R741]
74	RRLYD3127QCZZ	AH		B	Relay(JS1AF-24V)	[RY1]
75	RTRNZ0551BMZZ	AP		B	Transformer	[T701]
76	RH-VX0034BMZZ	AF		B	Varistor	[VR2]
77	VHVAG10PC702F	AH		B	Arestor	
	(Unit)					
901	CDENT2099FFDE	BD		E	Power supply PWB unit	

10 CCD PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF)	[C1]
2	VCKYPU1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C2]
3	QCNW-4406FFZZ	AF		C	Connector(7pin)	[CN1]
4	VHITCD1208P-1	AX		B	IC(TCD1208P-1)	[IC1]
5	VS2SC1815GR-1	AB		B	Transistor(2SC1815GR)	[Q1]
6	VRD-RC2EY222J	AA		C	Resistor(1/4W 2.2KΩ ±5%)	[R1]
7	VRD-RC2EY390J	AA		C	Resistor(1/4W 39Ω ±5%)	[R2]
	(Unit)					
901	DCEKD475AFFDE	AY		E	CCD PWB unit	

50 Hardware parts

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
B1	LX-BZ2138XHZZ	AB		C	Screw
B2	LX-BZ2182XHZZ	AB		C	Screw
B3	LX-BZ2201FFZZ	AA		C	Screw
B4	XBBSD30P06000	AA		C	Screw(3×6)
B5	XBPSN40P06K00	AA		C	Screw(4×6K)
B6	XEBSD30P06000	AA		C	Screw(M3×6)

50 Hardware parts

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
B7	XEBSD30P08000	AA		C	Screw(3×8)
B8	XEBSF30P08000	AA		C	Screw(3×8)
B9	XEBSF30P12000	AA		C	Screw(3×12)
B10	XEBSF30P40000	AA		C	Screw(3×4)
B11	XJPSD30P04000	AA		C	Screw(3×4)
B12	XUBSD20P06000	AA		C	Screw(2×6)
B14	XEBSD30P10000	AA		C	Screw(3×10)
B15	XBBSD30P08000	AA		C	Screw(3×8)
W1	XWHSD40-08100	AA		C	Washer(M4)
W2	XWHSD30-08100	AA		C	Washer(M3)

■ Index

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
[C]				
CCNW-4402FF01	4- 1	AE		C
CCNW-4405FF01	1- 2	AK		C
CCNW-4480FF01	1- 67	AK		C
CDENT2099FFDE	1- 49	BD		E
〃	9- 901	BD		E
CPNLH2359FF14	1- 1	BG	N	D
〃	2- 901	BG	N	D
CPNLH2359FF19	1- 1	BG	N	D
〃	2- 901	BG		D
CPNLH2359FF72	1- 1	BG	N	D
〃	2- 901	BG		D
CPNLH2359FF76	1- 1	BG	N	D
〃	2- 901	BG	N	D
CPNLH2359FF85	1- 1	BG	N	D
〃	2- 901	BG	N	D
CPWBX2858FF01	1- 3	BV	N	E
〃	7- 901	BV	N	E
CPWBX2858FF02	1- 3	BV	N	E
〃	7- 901	BV	N	E
[D]				
DCEKD475AFFDE	5- 1	AY		E
〃	10- 901	AY		E
DCEKL311BFFAT	1- 4	BH		E
〃	8- 901	BH		E
DCEKL311BFFBE	1- 4	BP		E
〃	8- 901	BP		E
DCEKL311BFFCH	1- 4	BM		E
〃	8- 901	BM		E
DCEKL311BFFES	1- 4	BE		E
〃	8- 901	BE		E
DCEKL311BFFIT	1- 4	BE		E
〃	8- 901	BP		E
DCEKL311BFFNL	1- 4	BN		E
〃	8- 901	BN		E
DCEKL311BFF15	1- 4	BN	N	E
〃	8- 901	BN	N	E
DCEKP423AFFDE	2- 1	BD		E
DCEKP423AFFHS	2- 1	BA		E
DUNTK307BFFAG	6- 8	AU		E
DUNTK307BFFOG	6- 8	AV		E
[G]				
GCABA2259FFSK	2- 2	AU		D
GCABA2259FFSP	2- 2	AS	N	D
GCABA2259FFSU	2- 2	AQ	N	D
GCABA2259FFSY	2- 2	AQ		D
GCABB2260FFSA	1- 5	AR		D
GCABB2260FFSB	1- 5	AR		D
GCOVA2352FFSA	1- 23	AL		D
GCOVA2353FFSB	1- 23	AL		D
GCOVA2354FFSB	1- 54	AL		D
[H]				
HPNLH2359FFZA	2- 3	AD		D
HPNLH2359FFZZ	2- 3	AD		D
[J]				
JKNBP2067FFSA	2- 4	AB		C
JKNBP2067FFSB	2- 4	AB		C
[L]				
LANGF2801FFZZ	1- 55	AB		C
LBSHP2063FFZZ	1- 37	AA		C
LBSHP2064FFZZ	1- 24	AA		C
LFRM-2147XHYA	5- 2	AV		C
LFRM-2153FFZZ	4- 2	AF		C
LFRM-2154FFZB	1- 50	AQ		C
LHLDR2153FFSA	1- 56	AC		C
LHLDR2153FFSB	1- 56	AC		C
LHLDW1033CE00	1- 7	AA		C
LPLTG2593XHZZ	3- 1	AG		C
LPLTM2741FFZZ	4- 13	AC		C
LPLTM2742FFZZ	1- 57	AD		C
LPLTP2703XHZZ	3- 2	AC		C
LX-BZ2138XHZZ	50- B1	AB		C
LX-BZ2182XHZZ	50- B2	AB		C
LX-BZ2201FFZZ	50- B3	AA		C
[M]				
MCAMP2019FFZZ	4- 14	AA		C
MCAMP2020FFZZ	4- 3	AA		C
MLEVP2185FFZZ	3- 3	AN		C
MLEVP2186FFSA	1- 9	AC		C
MLEVP2187FFZZ	1- 51	AB		C
MLEVP2188FFZZ	3- 4	AA		C
MLEVP2189FFZZ	3- 5	AA		C
MLEVP2190FFZZ	4- 4	AA		C
MLEVP2191FFZZ	4- 5	AA		C
MLEVP2193FFSA	1- 13	AB		C
MLEVP2193FFSB	1- 13	AC		C
MLEVP2194FFZZ	4- 19	AB		C
MSPRC2692XHZZ	3- 6	AB		C
MSPRC2693XHZZ	3- 7	AB		C
MSPRC2735FFFJ	4- 6	AB		C
MSPRC2737FFFJ	1- 52	AA		C
MSPRC2738FFFJ	1- 53	AA		C
MSPRC2740FFFA	1- 31	AA		C
MSPRC2760FFFJ	1- 38	AA		C
MSPRC2789FFFJ	1- 52	AA		C
MSPRD2733FFFJ	3- 8	AB		C
MSPRD2736FFFJ	4- 15	AC		C
MSPRD2741FFFJ	1- 32	AB		C
MSPRD2744FFFJ	4- 18	AA		C
MSPRP2512XHZZ	5- 3	AK		C
MSPRP2618XHZZ	5- 4	AD		C
MSPRP2619XHZZ	5- 5	AD		C
MSPRP2687XHZZ	1- 11	AC		C
MSPRP2688XHZZ	3- 9	AC		C
MSPRT2734FFFJ	3- 10	AB		C
[N]				
NBRGP2141XHZZ	3- 11	AH		C
NGERH2275FFZZ	3- 12	AA		C
NGERH2276FFZZ	4- 7	AA		C
NGERH2277FFZZ	4- 8	AA		C
NGERH2278FFZZ	4- 9	AA		C
NGERH2279FFZZ	4- 10	AA		C
NGERH2280FFZZ	4- 11	AA		C
NGERH2281FFZZ	4- 12	AA		C
NGERH2282FFZZ	1- 39	AA		C
NGERH2283FF01	1- 36	AA		C
NGERH2284FFZZ	1- 25	AA		C
NROLP2249XHZZ	1- 12	AE		C
NROLP2300XHZZ	3- 13	AC		C
NROLR2308FFZZ	3- 14	AG		C
NROLR2309FFZZ	1- 40	AH		C
NROLR2310FFZZ	1- 41	AH		C
NROLR2311FFZZ	1- 26	AN		C
NSFTZ2228SCZZ	3- 15	AC		C
[P]				
PCOVM2100FFZA	1- 44	AC		C
PCOVM2106FFSA	1- 45	AD		C
PCOVM2106FFSB	1- 45	AD		C
PCUSS2084FFZZ	1- 14	AB		C
PCUSS2089FFZZ	5- 6	AA		C
PCUT-2032FF01	1- 58	BB		C
PGIDM2289XHZZ	1- 33	AB		C
PGIDM2417FFZA	3- 16	AQ		C
PGIDM2418FFSA	1- 42	BC		C
PGIDM2418FFSB	1- 42	AN		C
PGIDM2419FFSA	1- 43	AG		C
PGIDM2419FFSB	1- 43	AB		C
PGIDM2420FFZA	1- 27	AB		C
PGIDM2421FFZZ	1- 28	AB		C
PGIDM2423FFZZ	1- 34	AC		C
PGLSP2043XHZZ	5- 7	AK		C
PHOP-2085FFZZ	6- 3	AC		D
PHOP-2086FFZZ	6- 4	AB		D
PLNS-2043XHZZ	5- 8	AU		B
PMIR-2061XHZZ	5- 9	AH		C
PMIR-2062XHZZ	5- 10	AM		C
PSHEZ2879XHZZ	5- 11	AK		C
PSHEZ2915XHZZ	5- 12	AY		C
PSHEZ3095FFZZ	1- 15	AW		C
PSHEZ3112XHZZ	3- 17	AD		C
PSHEZ3116FFAG	1- 46	AB		C
PSHEZ3116FFOG	1- 46	AA		C
PSHEZ3130FFZZ	1- 20	AA		C
PSHEZ3133FFAG	1- 61	AD		C
PSHEZ3133FFOG	1- 61	AD		C
PSHEZ3144FFZZ	1- 65	AA		C
PSHEZ3175FFAG	1- 63	AB		C
PSHEZ3175FFOG	1- 63	AB		C
PSHEZ3177FFZZ	1- 68	AB		C
PSHEZ3179FFZZ	1- 69	AB		C
PSHEZ3180FFZZ	1- 70	AB		C
PSHEZ3181FFZZ	1- 18	AC		C
PSHEZ3182FFZZ	1- 19	AC		C
[Q]				
QACCE2013FFZZ	1- 16	AP		B
QACCS2015FFZZ	1- 16	AP		B
QCNCM0672FCZZ	9- 1	AB		C
QCNCM2401SC0B	8- 89	AA		C
QCNCM2401SC0C	7- 158	AB		C
QCNCM2401SC0F	7- 155	AB		C
QCNCM2442SC0B	7- 154	AB		C
QCNCM2482SC1F	7- 160	AF		C
QCNCM2499SC1A	7- 157	AF		C
QCNCM2499SC1B	7- 156	AF		C
QCNCM7014SC0B	8- 84	AD		C
QCNCM7014SC0C	7- 161	AA		C
QCNCM7014SC0F	7- 159	AB		C
QCNCM7014SC0G	7- 153	AB		C
QCNCM7014SC0H	8- 88	AB		C
QCNCM7014SC1C	7- 163	AC		C
QCNCM705BAF06	8- 82	AA		C
QCNCM886JAFZZ	9- 20	AD		C
QCNCW2500SC0I	7- 162	AF		C
QCNCW2500SC1A	8- 86	AD		C
QCNCW2500SC1B	8- 85	AC		C
QCNTM2005FFZA	2- 5	AH		C
QCNTM2005FFZZ	2- 5	AL		C
QCNTM2006FFZA	2- 6	AD		C
QCNTM2006FFZZ	2- 6	AD		C
QCNTM2007FFZA	2- 7	AD		C
QCNTM2007FFZZ	2- 7	AD		C
QCNW-3976XHAG	6- 1	AH		C
QCNW-3976XHOG	6- 1	AT		C
QCNW-4111XHZZ	5- 13	AL		C
QCNW-4396FFZZ	1- 6	AM		C
QCNW-4397FFZZ	1- 71	AF		C
QCNW-4398FFZZ	4- 16	AC		C
QCNW-4399FFZZ	1- 29	AC		C
QCNW-4401FFZZ	1- 35	AK		C
QCNW-4406FFZZ	10- 3	AF		C
QCNW-4416FFZZ	6- 9	AK		C
QCNW-4417FFZZ	1- 59	AD		C
QCNW-4491FFZZ	6- 9	AK		C
QCNW-4646FFZZ	6- 9	AH		C
QCNW-4669FFZZ	6- 9	AS		C
QFS-C2050BMZZ	9- 37	AC		A
〃	9- 38	AC		A
QFSHD1010CEZZ	9- 41	AB		C
〃	9- 42	AB		C
QJAKZ2046SCFB	8- 87	AH		C
QJAKZ2047SC0D	8- 83	AG		C
QPLGJ2016FFZZ	6- 2	AK		C
QPLGJ2017FFZZ	6- 2	AM		C
QSOCZ2051SC32	7- 175	AC		C
QSW-Z2206SCZZ	8- 234	AH		B
QSW-Z2214SCZZ	8- 234	AH		B
QTANZ2045FFZZ	8- 4	AA	N	C
[R]				
RALMB2022SCZZ	1- 73	AH		B
RBLN-0037CEZZ	9- 39	AB		C
〃	9- 40	AB		C
RC-EZ0117BMZZ	9- 6	AP		C
RC-FZ0070BMZZ	9- 2	AD		C
RC-FZ12EA334K	8- 14	AC	N	C
RC-FZ22EA105K	8- 21	AE	N	C
RC-FZ22EA224K	8- 5	AD		C
RC-FZ22EA334K	8- 5	AD		C
RC-FZ22EA474K	8- 5	AH		C
RC-FZ23EA155K	8- 22	AE	N	C
RC-FZ9153BMNJ	9- 7	AB		C
RC-FZ9332BMNJ	9- 9	AA		C
RC-FZ9683BMNJ	9- 8	AB		C
RC-KZ0029CEZZ	9- 5	AC		C
RC-KZ0035CEZZ	9- 14	AC		C
RC-KZ0156CEZZ	9- 3	AD		C
〃	9- 4	AD		C
〃	9- 13	AD		C
RC-KZ0193BMZZ	9- 19	AD		C
RCILF0113BMZZ	9- 45	AG		C
RCILF2125SCZZ	8- 107	AD		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
RCILF2126SCZZ	8-109	AD		C
〃	8-110	AD		C
〃	8-111	AD		C
RCILF2127SCZZ	8-109	AF		C
RCILL2124SCZZ	8-110	AF		C
〃	8-112	AF		C
RCILP0110CEZZ	9-46	AD		C
〃	9-47	AD		C
RCILZ1044CCZZ	7-190	AC		C
〃	7-191	AC		C
〃	7-193	AC		C
〃	7-194	AC		C
〃	7-195	AC		C
〃	7-196	AC		C
〃	7-197	AC		C
〃	7-199	AC		C
〃	7-200	AC		C
〃	7-201	AC		C
〃	7-202	AC		C
RCILZ2104SCZZ	7-198	AK		C
RCORF2063SCZZ	1-17	AE		B
RCORF2064SCZZ	1-8	AE		B
RCORF6662RCZZ	1-72	AK		B
RCRM-0091AFZZ	8-239	AE		B
RCRSB0297AFZZ	7-396	AD		B
RCRSZ7008SCZZ	7-395	AD		B
RCTSZ2101SCZZ	7-394	AK		B
RFILN2011SCZZ	8-104	AC		C
〃	8-105	AC		C
RFILN2013SCZZ	8-108	AG		C
RH-DX0045BMZZ	9-26	AA		B
〃	9-34	AA		B
〃	9-36	AA		B
RH-DX0296BMZZ	9-33	AH		B
RH-DX0532BMZZ	9-21	AD		B
〃	9-22	AD		B
〃	9-23	AD		B
〃	9-24	AD		B
RH-DX0533BMZZ	9-29	AD		B
RH-DX0539BMZZ	9-25	AC		B
RH-EX0400BMZZ	9-35	AB		B
RH-EX0408BMZZ	9-30	AB		B
RH-EX0410BMZZ	9-27	AB		B
〃	9-31	AB		B
RH-EX0425BMZZ	9-32	AA		B
RH-EX0612BMZZ	9-28	AB		B
RH-FX0101BMZZ	9-43	AE		B
RH-TX0106BMZZ	9-51	AB		B
RH-TX0128BMZZ	9-48	AM		B
RH-TX0130BMZZ	9-49	AB		B
〃	9-50	AB		B
RH-VX0034BMZZ	9-76	AF		B
RHEDZ2046XHZZ	1-30	BT		B
RMOTZ2117FF01	4-17	AV		B
RR-XZ0202BMZZ	9-44	AA		C
RR-XZ3010FFZZ	7-292	AA		C
RRLYD3127QCZZ	9-74	AH		B
RRLYZ3420SCZZ	8-81	AR		B
RTRNI2142XHZZ	8-235	AR		B
〃	8-236	AR		B
RTRNZ0551BMZZ	9-75	AP		B
RTRNZ2140XHZZ	8-235	AN		B
RVR-M4157BMZZ	9-73	AB		C
[S]				
SPAKA4590FFZZ	6-11	AF		D
SPAKA4591FFZZ	6-12	AF		D
SPAKA4629FFZZ	6-11	AG		D
SPAKA4630FFZZ	6-12	AG		D
SPAKA4704FFZZ	6-15	AA		C
SPAKA4803FFZZ	6-10	AB		D
SPAKC016AFFZZ	6-13	AM		D
SPAKC018AFFZZ	6-13	AM	N	D
SPAKC4990FFZZ	6-13	AL	N	D
SPAKP3385FFZZ	6-14	AB		D
SSAKA1004BMZZ	6-5	AA		D
[T]				
TCADZ2466FFZZ	6-16	AG		D
TINSF3650FFZZ	6-6	AK	N	D
TINSG3648FFZZ	6-6	AK	N	D
TINSH3651FFZZ	6-6	AK	N	D

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
TINSI3654FFZZ	6-6	AG		D
TINSS3649FFZZ	6-6	AK		D
TINSW3652FFZZ	6-6	AL		D
TLABH3651FFZA	6-7	AC		D
TLABH3651FFZZ	6-7	AG		D
[U]				
UBATL2033SCZZ	7-1	AK		B
[V]				
VCCCTV1HH101J	8-71	AA		C
VCCCTV1HH121J	8-39	AA		C
VCCCTV1HH150J	7-15	AA		C
〃	7-150	AA		C
VCCCTV1HH180J	7-149	AA		C
VCCCTV1HH221J	8-45	AA		C
〃	8-71	AA		C
VCCCTV1HH300J	7-101	AA		C
〃	7-102	AA		C
〃	8-53	AA		C
〃	8-54	AA		C
VCCCTV1HH470J	7-49	AA		C
VCCCTV1HH8R0D	7-95	AA		C
〃	7-97	AA		C
VCCSPA1HL151J	9-16	AA		C
VCCSTV1HL101J	7-47	AA		C
〃	7-48	AA		C
〃	7-56	AA		C
〃	7-57	AA		C
〃	7-109	AA		C
VCCSTV1HL391J	7-58	AA		C
〃	7-59	AA		C
〃	7-60	AA		C
〃	7-61	AA		C
〃	7-63	AA		C
VCCSTV1HL391L	7-62	AA		C
VCEAGA0JW107M	8-29	AA		C
VCEAGA1AW227M	8-20	AB		C
VCEAGA1AW336M	8-28	AA		C
VCEAGA1CW106M	7-9	AA		C
〃	7-40	AA		C
〃	7-41	AA		C
〃	7-42	AA		C
〃	7-79	AA		C
VCEAGA1CW107M	8-6	AC		C
〃	9-12	AC		C
〃	9-18	AC		C
VCEAGA1CW108M	9-11	AE		C
VCEAGA1EW106M	8-17	AA		C
VCEAGA1EW226M	7-16	AB		C
〃	7-17	AB		C
〃	7-72	AB		C
VCEAGA1EW475M	7-78	AA		C
VCEAGA1EW476M	8-11	AA		C
〃	8-17	AA		C
〃	8-25	AA		C
〃	8-27	AA		C
〃	8-31	AA		C
VCEAGA1HW104M	8-18	AB		C
〃	8-24	AB		C
VCEAGA1HW105M	8-5	AB		C
〃	8-7	AB		C
〃	8-8	AB		C
〃	8-9	AB		C
〃	8-10	AB		C
〃	8-11	AB		C
〃	8-12	AB		C
〃	8-18	AB		C
〃	8-33	AB		C
VCEAGA1HW106M	8-6	AA		C
〃	8-7	AA		C
〃	8-12	AA		C
〃	8-13	AA		C
〃	8-24	AA		C
〃	8-28	AA		C
〃	8-29	AA		C
〃	8-32	AA		C
VCEAGA1HW107M	7-7	AA		C
VCEAGA1HW225M	8-9	AA		C
〃	8-10	AA		C
〃	8-34	AA		C
VCEAGA1HW226M	7-18	AB		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VCEAGA1HW226M	7-19	AB		C
〃	7-73	AB		C
〃	8-16	AB		C
〃	8-19	AB		C
〃	8-22	AB		C
〃	10-1	AB		C
VCEAGA1HW334M	8-16	AC		C
VCEAGA1HW335M	8-15	AB		C
VCEAGA1HW475M	8-8	AA		C
〃	8-13	AA		C
〃	8-14	AA		C
〃	8-30	AA		C
〃	8-33	AA		C
VCEAGA1HW477M	9-15	AE		C
〃	9-17	AE		C
VCEAGA2AW105M	8-16	AA		C
VCEAGA2AW225M	8-16	AC		C
VCEAGA2AW474M	8-16	AC		C
VCFYDA1HA824J	8-21	AD		C
〃	8-26	AD		C
VCKYPU1HF223Z	10-2	AA		C
VCKYTQ1EB224K	8-78	AB		C
〃	8-79	AB		C
VCKYTQ1EB334K	8-79	AB		C
VCKYTQ1EB823K	8-76	AB		C
VCKYTQ1HB103K	8-40	AA		C
〃	8-43	AA		C
VCKYTQ1HB104K	8-50	AB		C
〃	8-70	AB		C
VCKYTQ1HB183K	8-37	AA		C
VCKYTQ1HB223K	8-44	AB		C
VCKYTQ1HB273K	8-43	AC		C
〃	8-76	AC		C
VCKYTQ1HB333K	8-40	AA		C
〃	8-44	AA		C
〃	8-46	AA		C
VCKYTQ1HB393K	8-38	AA		C
VCKYTQ1HB473K	8-44	AA		C
〃	8-77	AA		C
VCKYTQ1HB563K	8-40	AA		C
〃	8-76	AA		C
VCKYTQ1HB683K	8-48	AB		C
〃	8-67	AB		C
VCKYTQ1HF104Z	7-151	AA		C
VCKYTV1CB224K	7-30	AC		C
VCKYTV1CF105Z	7-28	AB		C
〃	7-32	AB		C
〃	7-33	AB		C
〃	7-82	AB		C
〃	7-83	AB		C
〃	7-85	AB		C
〃	7-86	AB		C
〃	7-96	AB		C
〃	7-115	AB		C
VCKYTV1EB104K	7-2	AA		C
〃	7-35	AA		C
〃	7-104	AA		C
〃	7-107	AA		C
〃	7-116	AA		C
VCKYTV1EB683K	7-108	AC		C
〃	7-110	AC		C
〃	8-58	AC		C
VCKYTV1EF104Z	7-3	AA		C
〃	7-6	AA		C
〃	7-8	AA		C
〃	7-13	AA		C
〃	7-14	AA		C
〃	7-20	AA		C
〃	7-21	AA		C
〃	7-22	AA		C
〃	7-23	AA		C
〃	7-24	AA		C
〃	7-26	AA		C
〃	7-31	AA		C
〃	7-36	AA		C
〃	7-38	AA		C
〃	7-39	AA		C
〃	7-43	AA		C
〃	7-44	AA		C
〃	7-45	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VCKYTV1EF104Z	7- 46	AA		C
〃	7- 50	AA		C
〃	7- 64	AA		C
〃	7- 65	AA		C
〃	7- 70	AA		C
〃	7- 71	AA		C
〃	7- 75	AA		C
〃	7- 80	AA		C
〃	7- 81	AA		C
〃	7- 84	AA		C
〃	7- 87	AA		C
〃	7- 88	AA		C
〃	7- 89	AA		C
〃	7- 90	AA		C
〃	7- 99	AA		C
〃	7- 103	AA		C
〃	7- 105	AA		C
〃	7- 111	AA		C
〃	7- 113	AA		C
〃	7- 114	AA		C
〃	7- 117	AA		C
〃	7- 118	AA		C
〃	7- 119	AA		C
〃	7- 124	AA		C
〃	7- 125	AA		C
〃	7- 126	AA		C
〃	7- 127	AA		C
〃	7- 128	AA		C
〃	7- 129	AA		C
〃	7- 130	AA		C
〃	7- 132	AA		C
〃	7- 133	AA		C
〃	7- 135	AA		C
〃	7- 136	AA		C
〃	7- 139	AA		C
〃	7- 143	AA		C
〃	7- 152	AA		C
〃	8- 41	AA		C
〃	8- 42	AA		C
〃	8- 51	AA		C
〃	8- 55	AA		C
VCKYTV1HB102J	8- 72	AA		C
VCKYTV1HB102K	7- 10	AA		C
〃	7- 11	AA		C
〃	7- 12	AA		C
〃	7- 25	AA		C
〃	7- 29	AA		C
〃	7- 55	AA		C
〃	7- 66	AA		C
〃	7- 67	AA		C
〃	7- 68	AA		C
〃	7- 69	AA		C
〃	7- 74	AA		C
〃	7- 76	AA		C
〃	7- 77	AA		C
〃	7- 91	AA		C
〃	7- 92	AA		C
〃	7- 93	AA		C
〃	7- 94	AA		C
〃	7- 98	AA		C
〃	7- 100	AA		C
〃	7- 112	AA		C
〃	7- 120	AA		C
〃	7- 121	AA		C
〃	7- 122	AA		C
〃	7- 123	AA		C
〃	7- 137	AA		C
〃	7- 138	AA		C
〃	7- 140	AA		C
〃	7- 141	AA		C
〃	7- 142	AA		C
〃	7- 144	AA		C
〃	7- 145	AA		C
〃	7- 146	AA		C
〃	7- 147	AA		C
〃	7- 148	AA		C
〃	8- 39	AA		C
〃	8- 43	AA		C
〃	8- 44	AA		C
〃	8- 45	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VCKYTV1HB102K	8- 46	AA		C
〃	8- 47	AA		C
〃	8- 53	AA		C
〃	8- 73	AA		C
〃	8- 74	AA		C
VCKYTV1HB103K	7- 5	AB		C
〃	7- 106	AB		C
〃	8- 61	AB		C
〃	8- 62	AB		C
〃	8- 63	AB		C
〃	8- 64	AB		C
〃	8- 65	AB		C
〃	8- 66	AB		C
〃	8- 68	AB		C
〃	8- 75	AB		C
VCKYTV1HB182K	8- 48	AA		C
〃	8- 73	AA		C
VCKYTV1HB183K	8- 62	AA		C
VCKYTV1HB221K	8- 49	AA		C
VCKYTV1HB222K	7- 34	AA		C
〃	7- 51	AA		C
〃	7- 52	AA		C
〃	7- 53	AA		C
〃	7- 54	AA		C
〃	7- 131	AA		C
〃	7- 134	AA		C
〃	8- 54	AA		C
〃	8- 57	AA		C
〃	8- 73	AA		C
VCKYTV1HB223K	8- 62	AA		C
VCKYTV1HB273K	8- 41	AA		C
〃	8- 62	AA		C
VCKYTV1HB331K	8- 36	AA		C
〃	8- 45	AA		C
〃	8- 50	AA		C
〃	8- 51	AA		C
〃	8- 52	AA		C
〃	8- 56	AA		C
〃	8- 57	AA		C
〃	8- 58	AA		C
〃	8- 59	AA		C
〃	8- 60	AA		C
VCKYTV1HB332K	8- 62	AA		C
VCKYTV1HB391K	8- 45	AA		C
VCKYTV1HB392K	7- 37	AA		C
VCKYTV1HB471K	8- 36	AA		C
〃	8- 45	AA		C
〃	8- 71	AA		C
VCKYTV1HB472K	7- 4	AA		C
〃	8- 69	AA		C
VCKYTV1HB473K	8- 61	AA		C
〃	8- 63	AA		C
VCKYTV1HB561K	8- 35	AA		C
〃	8- 52	AA		C
〃	8- 71	AA		C
VCKYTV1HB562K	8- 65	AA		C
〃	8- 68	AA		C
〃	8- 74	AA		C
VCKYTV1HB681K	8- 39	AA		C
〃	8- 40	AA		C
VCKYTV1HB821K	8- 36	AA		C
〃	8- 47	AA		C
〃	8- 71	AA		C
VCKYTV1HB822K	8- 61	AA		C
〃	8- 63	AA		C
VCKYTV1HF223Z	8- 37	AA		C
〃	8- 38	AA		C
〃	8- 42	AA		C
〃	8- 49	AA		C
〃	8- 55	AA		C
VCKZPA1HB102K	9- 10	AA		C
VCQYNA1HM224K	8- 15	AC		C
VCQYNA1HM334K	8- 21	AD		C
〃	8- 26	AD		C
VCQYNA1HM393K	8- 23	AB		C
VHDDAP202K/-1	7- 169	AB		B
VHDDSS131//-1	8- 90	AA		B
〃	8- 92	AA		B
〃	8- 93	AA		B
VHDDSS133//-1	8- 90	AA		B

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VHDDSS133//-1	8- 91	AA		B
VHDRB421D//-1	8- 94	AC		B
VHDS1ZB60//-1	8- 233	AC		B
VHD0R5G4B42-1	8- 233	AF		B
VHD1SS355//-1	7- 164	AB		B
〃	7- 165	AB		B
〃	7- 166	AB		B
〃	7- 167	AB		B
〃	7- 168	AB		B
〃	7- 170	AB		B
VHEBZX79B10/A	8- 254	AC		B
VHEBZX79B18/A	8- 248	AA		B
VHEBZX79B2V4A	8- 241	AB		B
〃	8- 242	AB	N	B
〃	8- 243	AB	N	B
〃	8- 249	AB		B
〃	8- 250	AB		B
〃	8- 253	AB		B
VHEBZX79B2V7A	8- 250	AC		B
VHEBZX79B20/A	8- 246	AA	N	B
〃	8- 248	AC		B
VHEBZX79B3V0A	8- 253	AA		B
VHEBZX79B30/A	8- 248	AC		B
VHEBZX79B33/A	8- 248	AA		B
VHEBZX79B4V7A	8- 244	AA	N	B
〃	8- 245	AA	N	B
〃	8- 252	AA		B
VHEBZX79B5V1A	8- 249	AA	N	B
〃	8- 252	AA		B
VHEBZX79B5V6A	8- 252	AA		B
VHEBZ79XB6V8A	8- 247	AA	N	B
VHEHZS3B1//-1	8- 240	AC		B
〃	8- 241	AC		B
〃	8- 242	AC		B
〃	8- 243	AC		B
〃	8- 244	AC		B
〃	8- 245	AC		B
〃	8- 246	AC		B
〃	8- 247	AC		B
VHEHZ11C3//-1	7- 400	AB		B
VHEHZ2A1///-1	7- 397	AC		B
〃	7- 398	AC		B
〃	8- 240	AC		B
〃	8- 241	AC		B
〃	8- 249	AC		B
〃	8- 250	AC		B
〃	8- 253	AC		B
VHEMPZP4748A1	7- 399	AA		B
VHE1ZC15///-1	8- 251	AC		B
VHIKS58008/-1	8- 96	AU		B
VHILH28F004SU	7- 172	BE		B
VHILMT2903DR2	7- 189	AC		B
VHIMC14051DR2	7- 180	AE		B
VHIMC14053DR2	7- 183	AE		B
〃	8- 100	AE		B
VHIMC14066DR2	7- 179	AE		B
〃	8- 101	AE		B
VHIMC1458DTR/	7- 182	AD		B
〃	7- 184	AD		B
〃	7- 185	AD		B
〃	7- 186	AD		B
〃	8- 99	AD		B
〃	8- 100	AD		B
〃	8- 101	AD		B
〃	8- 102	AD		B
VHIMC340121-1	8- 102	AF		B
VHIMC34119DR2	8- 98	AF		B
〃	8- 103	AF		B
VHIMC74HCU04F	7- 187	AD		B
VHIM5255CF70L	7- 173	AW		B
VHINJM318E/-F	7- 181	AF		B
VHIPST591CMT1	7- 188	AE		B
VHIR96V12SFEV	7- 174	BN		B
〃	7- 176	BG		B
VHITA7291PV-1	7- 178	AM		B
VHITCD1208P-1	10- 4	AX		B
VHITEA1062A-1	8- 97	AR		B
VHITHS56F//-1	8- 95	AS		B
VHIULM2003AN/	7- 177	AE		B
VHI27020FFM0A	7- 175	BM	N	B

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VHI27020FFN0A	7-175	BM	N	B
VHI27020FFP0A	7-175	BM	N	B
VHI27020FFR0A	7-175	BM	N	B
VHI27020FFT0A	7-175	BM	N	B
VHI27020FFU0B	7-175	BM	N	B
VHI27020FFV0D	7-175	BM	N	B
VHI27020FGQ0A	7-175	BM	N	B
VHPRPI-574///	8-116	AF		B
〃	8-117	AF		B
VHPSG113///-1	1-60	AP		B
VHPSNK08A24-1	5-14	AZ		B
VHPTLP521-1BL	8-113	AE		B
〃	8-113	AE		B
〃	8-114	AE		B
〃	8-115	AE		B
〃	8-117	AE		B
〃	8-118	AE		B
〃	8-119	AE		B
〃	8-120	AE		B
VHPTLP627//-1	8-114	AH		B
〃	8-116	AH		B
〃	8-121	AH		B
VHVAG10PC702F	9-77	AH		B
VHVICPS07//-1	7-171	AA		B
VHVRA501PV6-1	8-1	AE	N	B
〃	8-2	AE	N	B
〃	8-3	AE	N	B
VHVSIOS14K150	8-238	AH		B
VHVSIOVS05K60	8-237	AH		B
VRD-HT2EY243J	8-145	AA		C
VRD-HT2HY150J	8-147	AA	N	C
〃	8-150	AA		C
VRD-HT2HY180J	8-149	AA		C
VRD-HT2HY200J	8-148	AA		C
〃	8-149	AA		C
VRD-HT2HY223J	8-146	AA	N	C
VRD-HT2HY270J	8-149	AA		C
VRD-HT2HY303J	8-147	AA		C
VRD-HT2HY433J	8-147	AA		C
VRD-HT2HY913J	8-147	AB		C
VRD-RA2BE221J	9-59	AA		C
VRD-RA2BE222J	9-64	AA		C
VRD-RA2BE223J	9-69	AA		C
VRD-RA2BE272J	9-66	AA		C
VRD-RA2BE682J	9-67	AA		C
VRD-RA2EE680J	9-61	AA		C
VRD-RA2HD102J	9-62	AA		C
VRD-RA2HD152J	9-63	AA		C
VRD-RA2HD224J	9-54	AA		C
〃	9-55	AA		C
VRD-RA2HD272J	9-70	AA		C
〃	9-71	AA		C
〃	9-72	AA		C
VRD-RA2HD334J	9-56	AA		C
VRD-RA2HD471J	9-65	AA		C
VRD-RA2HD561J	9-60	AA		C
〃	9-68	AA		C
VRD-RA2HD564J	9-57	AC		C
VRD-RC2EY222J	10-6	AA		C
VRD-RC2EY390J	10-7	AA		C
VRD-TS2AD103J	7-262	AA		C
VRN-VV3ABR27J	9-58	AA		C
VRS-HT3AA103J	8-145	AA		C
〃	8-146	AA		C
VRS-HT3AA123J	8-145	AA		C
〃	8-146	AA		C
VRS-HT3AA223J	8-146	AA		C
〃	8-146	AA		C
VRS-HT3AA300J	8-148	AC		C
VRS-HT3AA430J	8-148	AB		C
VRS-HT3DA750J	8-149	AA		C
VRS-TS2AD000J	7-27	AA		C
〃	7-135	AA		C
〃	7-192	AA		C
〃	7-247	AA		C
〃	7-300	AA		C
〃	7-304	AA		C
〃	7-317	AA		C
〃	7-340	AA		C
〃	7-346	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD000J	7-351	AA		C
〃	7-383	AA		C
〃	7-392	AA		C
〃	8-59	AA		C
〃	8-80	AA		C
〃	8-94	AA		C
〃	8-106	AA		C
〃	8-154	AA		C
〃	8-165	AA		C
〃	8-171	AA		C
〃	8-174	AA		C
〃	8-177	AA		C
〃	8-178	AA		C
〃	8-198	AA		C
〃	8-201	AA		C
〃	8-202	AA		C
〃	8-203	AA		C
〃	8-208	AA		C
〃	8-211	AA		C
〃	8-229	AA		C
〃	8-231	AA		C
VRS-TS2AD100J	7-255	AA		C
〃	7-263	AA		C
〃	8-179	AA		C
VRS-TS2AD101J	7-326	AA		C
VRS-TS2AD102J	7-226	AA		C
〃	7-338	AA		C
〃	7-387	AA		C
〃	7-388	AA		C
〃	8-164	AA		C
〃	8-182	AA		C
〃	8-187	AA		C
〃	8-190	AA		C
〃	8-191	AA		C
VRS-TS2AD103F	7-325	AA		C
〃	7-343	AA		C
VRS-TS2AD103J	7-214	AA		C
〃	7-216	AA		C
〃	7-218	AA		C
〃	7-237	AA		C
〃	7-238	AA		C
〃	7-244	AA		C
〃	7-245	AA		C
〃	7-250	AA		C
〃	7-257	AA		C
〃	7-258	AA		C
〃	7-259	AA		C
〃	7-261	AA		C
〃	7-264	AA		C
〃	7-265	AA		C
〃	7-270	AA		C
〃	7-278	AA		C
〃	7-279	AA		C
〃	7-280	AA		C
〃	7-281	AA		C
〃	7-284	AA		C
〃	7-305	AA		C
〃	7-307	AA		C
〃	7-337	AA		C
〃	7-342	AA		C
〃	7-347	AA		C
〃	7-355	AA		C
〃	7-373	AA		C
〃	7-374	AA		C
〃	7-377	AA		C
〃	7-379	AA		C
〃	7-389	AA		C
〃	8-167	AA		C
〃	8-169	AA		C
〃	8-176	AA		C
〃	8-183	AA		C
〃	8-190	AA		C
〃	8-193	AA		C
〃	8-194	AA		C
〃	8-196	AA		C
〃	8-200	AA		C
VRS-TS2AD104J	7-212	AA		C
〃	7-249	AA		C
〃	7-344	AA		C
〃	7-393	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD104J	8-153	AA		C
〃	8-179	AA		C
〃	8-186	AA		C
〃	8-194	AA		C
〃	8-199	AA		C
〃	8-218	AA		C
〃	8-222	AA		C
〃	8-230	AA		C
VRS-TS2AD105J	7-327	AA		C
VRS-TS2AD106J	7-293	AA		C
VRS-TS2AD113J	8-169	AA		C
VRS-TS2AD114J	8-214	AA		C
VRS-TS2AD122J	8-164	AA		C
〃	8-192	AA		C
〃	8-223	AA		C
VRS-TS2AD123J	7-227	AA		C
〃	8-193	AA		C
VRS-TS2AD124J	8-155	AA		C
〃	8-207	AA		C
VRS-TS2AD133J	8-193	AA		C
VRS-TS2AD134J	8-176	AA		C
〃	8-214	AA		C
〃	8-220	AA		C
VRS-TS2AD150J	8-201	AA		C
〃	8-203	AA		C
VRS-TS2AD151J	7-217	AA		C
〃	7-309	AA		C
〃	7-310	AA		C
〃	7-311	AA		C
〃	7-312	AA		C
〃	7-313	AA		C
〃	7-314	AA		C
〃	7-315	AA		C
〃	7-316	AA		C
〃	8-186	AA		C
VRS-TS2AD152J	8-155	AA		C
VRS-TS2AD153J	8-163	AA		C
VRS-TS2AD164J	8-170	AA		C
VRS-TS2AD182J	8-197	AA		C
VRS-TS2AD183J	8-158	AA		C
〃	8-167	AA		C
〃	8-193	AA		C
〃	8-212	AA		C
VRS-TS2AD184J	7-220	AA		C
〃	7-277	AA		C
VRS-TS2AD203J	7-372	AA		C
〃	8-154	AA		C
〃	8-156	AA		C
〃	8-158	AA		C
〃	8-159	AA		C
〃	8-160	AA		C
〃	8-161	AA		C
〃	8-162	AA		C
〃	8-167	AA		C
〃	8-170	AA		C
〃	8-171	AA		C
〃	8-212	AA		C
VRS-TS2AD204J	8-184	AA		C
〃	8-187	AA		C
〃	8-204	AA		C
〃	8-206	AA		C
〃	8-218	AA		C
〃	8-222	AA		C
〃	8-223	AA		C
〃	8-224	AA		C
〃	8-231	AA		C
〃	8-232	AA		C
VRS-TS2AD205J	8-232	00		C
VRS-TS2AD221J	8-188	AA		C
〃	8-189	AA		C
〃	8-191	AA		C
〃	8-192	AA		C
〃	8-194	AA		C
VRS-TS2AD222J	8-180	AA		C
〃	8-181	AA		C
VRS-TS2AD223J	7-319	AA		C
〃	7-329	AA		C
〃	7-371	AA		C
〃	7-383	AA		C
〃	8-160	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD223J	8-161	AA		C
〃	8-166	AA		C
〃	8-173	AA		C
〃	8-174	AA		C
VRS-TS2AD224J	8-187	AA		C
VRS-TS2AD241J	8-166	AA		C
〃	8-223	AA		C
〃	8-228	AA		C
VRS-TS2AD243J	8-157	AA		C
〃	8-212	AA		C
VRS-TS2AD271J	7-228	AA		C
〃	7-229	AA		C
〃	7-230	AA		C
〃	7-231	AA		C
〃	7-232	AA		C
〃	7-233	AA		C
〃	7-234	AA		C
〃	7-235	AA		C
〃	7-236	AA		C
〃	7-239	AA		C
〃	7-240	AA		C
〃	7-241	AA		C
〃	7-242	AA		C
〃	7-243	AA		C
〃	7-246	AA		C
〃	7-256	AA		C
〃	7-260	AA		C
〃	7-266	AA		C
〃	7-269	AA		C
〃	7-271	AA		C
〃	7-272	AA		C
〃	7-273	AA		C
〃	7-274	AA		C
〃	7-275	AA		C
〃	7-276	AA		C
〃	7-282	AA		C
〃	7-283	AA		C
〃	7-285	AA		C
〃	7-286	AA		C
〃	7-287	AA		C
〃	7-288	AA		C
〃	7-289	AA		C
〃	7-290	AA		C
〃	7-291	AA		C
〃	7-294	AA		C
〃	7-295	AA		C
〃	7-296	AA		C
〃	7-297	AA		C
〃	7-298	AA		C
〃	7-299	AA		C
〃	7-303	AA		C
〃	7-306	AA		C
〃	7-308	AA		C
〃	7-330	AA		C
〃	7-331	AA		C
〃	7-332	AA		C
〃	7-333	AA		C
〃	7-334	AA		C
〃	7-335	AA		C
〃	7-345	AA		C
〃	7-348	AA		C
〃	7-349	AA		C
〃	7-352	AA		C
〃	7-358	AA		C
〃	7-359	AA		C
〃	7-360	AA		C
〃	7-361	AA		C
〃	7-362	AA		C
〃	7-363	AA		C
〃	7-364	AA		C
〃	7-365	AA		C
〃	7-366	AA		C
〃	7-367	AA		C
〃	7-375	AA		C
〃	7-376	AA		C
〃	7-378	AA		C
〃	7-381	AA		C
〃	7-390	AA		C
〃	8-228	AA		C
VRS-TS2AD273J	7-223	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD273J	7-323	AA		C
〃	8-152	AA		C
〃	8-154	AA		C
〃	8-193	AA		C
〃	8-213	AA		C
VRS-TS2AD3R0J	7-341	AA		C
VRS-TS2AD301J	8-177	AA		C
〃	8-182	AA		C
〃	8-228	AA		C
VRS-TS2AD302J	7-213	AA		C
〃	7-215	AA		C
〃	8-152	AA		C
〃	8-178	AA		C
〃	8-223	AA		C
VRS-TS2AD303J	7-321	AA		C
〃	7-324	AA		C
〃	8-157	AA		C
VRS-TS2AD304J	7-210	AA		C
〃	7-211	AA		C
VRS-TS2AD331J	8-156	AA		C
〃	8-166	AA		C
〃	8-198	AA		C
〃	8-223	AA		C
VRS-TS2AD332J	7-368	AA		C
〃	8-181	AA		C
〃	8-216	AA		C
〃	8-221	AA		C
VRS-TS2AD333J	7-224	AA		C
〃	7-251	AA		C
〃	7-318	AA		C
〃	7-353	AA		C
〃	7-354	AA		C
〃	7-356	AA		C
〃	7-357	AA		C
〃	7-380	AA		C
〃	8-159	AA		C
〃	8-162	AA		C
VRS-TS2AD362J	8-196	AA		C
〃	8-205	AA		C
〃	8-221	AA		C
VRS-TS2AD363J	8-157	AA		C
〃	8-212	AA		C
VRS-TS2AD391J	8-166	AA		C
〃	8-174	AA		C
〃	8-228	AA		C
VRS-TS2AD392J	8-175	AA		C
〃	8-193	AA		C
〃	8-196	AA		C
〃	8-221	AA		C
VRS-TS2AD393J	8-212	AA		C
VRS-TS2AD394J	7-222	AA		C
VRS-TS2AD431J	8-215	AA		C
〃	8-223	AA		C
VRS-TS2AD432J	8-205	AA		C
VRS-TS2AD433J	8-194	AA		C
VRS-TS2AD470J	8-195	AA		C
VRS-TS2AD471J	8-164	AA		C
〃	8-209	AA		C
〃	8-210	AA		C
〃	8-225	AA		C
〃	8-226	AA		C
〃	8-227	AA		C
〃	8-228	AA		C
VRS-TS2AD472J	7-253	AA		C
〃	7-336	AA		C
〃	7-370	AA		C
〃	7-385	AA		C
〃	7-386	AA		C
〃	8-185	AA		C
VRS-TS2AD473J	8-157	AA		C
〃	8-214	AA		C
VRS-TS2AD474J	7-391	AA		C
〃	8-180	AA		C
VRS-TS2AD510J	8-165	AA		C
VRS-TS2AD511J	7-248	AA		C
〃	8-166	AA		C
〃	8-184	AA		C
VRS-TS2AD512J	8-205	AA		C
〃	8-205	AA		C
VRS-TS2AD513J	7-252	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD562J	7-369	AA		C
〃	7-384	AA		C
VRS-TS2AD563J	7-221	AA		C
〃	8-168	AA		C
VRS-TS2AD621J	8-163	AA		C
〃	8-164	AA		C
〃	8-165	AA		C
VRS-TS2AD623J	8-155	AA		C
〃	8-168	AA		C
VRS-TS2AD681J	8-164	AA		C
〃	8-215	AA		C
VRS-TS2AD683J	7-254	AA		C
〃	7-382	AA		C
〃	8-168	AA		C
〃	8-194	AA		C
〃	8-214	AA		C
〃	8-217	AA		C
〃	8-219	AA		C
VRS-TS2AD751J	8-163	AA		C
〃	8-164	AA		C
VRS-TS2AD752J	8-172	AA		C
VRS-TS2AD753J	8-151	AA		C
〃	8-155	AA		C
〃	8-168	AA		C
〃	8-183	AA		C
〃	8-185	AA		C
〃	8-194	AA		C
VRS-TS2AD754J	7-219	AA		C
VRS-TS2AD820J	7-267	AA		C
〃	7-268	AA		C
〃	7-328	AA		C
VRS-TS2AD821J	7-350	AA		C
VRS-TS2AD822J	7-225	AA		C
〃	8-175	AA		C
VRS-TS2AD823J	8-194	AA		C
VRS-TS2AD911J	8-157	AA		C
〃	8-164	AA		C
VRS-TS2AD912J	8-156	AA		C
VRS-TS2AD913J	8-168	AA		C
VRS-TS2BD000J	7-301	AA		C
VRS-TS2BD121J	7-302	AA		C
VRSTS2AD1373F	7-339	AA		C
VRSTS2AD1802F	7-322	AA		C
VRSTS2AD3651F	8-195	AA		C
VRSTS2AD6812F	7-320	AA		C
VRW-KP3HC5R6K	9-53	AC		C
VSBCR133///-1	7-203	AA		B
〃	7-204	AA		B
〃	7-205	AA		B
〃	7-206	AA		B
〃	7-207	AA		B
〃	7-209	AA		B
〃	8-123	AA		B
〃	8-125	AA		B
〃	8-126	AA		B
〃	8-127	AA		B
〃	8-129	AA		B
〃	8-130	AA		B
〃	8-131	AA	N	B
〃	8-132	AA	N	B
〃	8-133	AA	N	B
〃	8-135	AA		B
〃	8-140	AA		B
〃	8-141	AA		B
〃	8-142	AA		B
VSBSS123LT1-1	8-133	AC		B
VSBS108////-1	8-122	AE		B
VSDTD123YK/-1	8-127	AC		B
〃	8-129	AC		B
VSPMBFJ177/-1	8-124	AF		B
VSR-HT3AA620J	8-148	AA		C
VS2SA1037KR-1	8-132	AB		B
VS2SA1807-P-1	8-122	AE		B
VS2SC1815GR-1	10-5	AB		B
VS2SC2412KR-1	8-124	AD		B
〃	8-128	AD		B
〃	8-131	AD		B
〃	8-136	AD		B
〃	8-137	AD		B
〃	8-138	AD		B

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VS2SC2412KR-1	8- 139	AD		B
〃	8- 143	AD		B
〃	8- 144	AD		B
VS2SC2412KS-1	7- 208	AB		B
VS2SC4061K/-1	8- 133	AC		B
〃	8- 134	AC		B
VS2SD1913S/1E	9- 52	AD		B
[X]				
XBBSD30P06000	50- B4	AA		C
XBBSD30P08000	50- B15	AA		C
XBPSN40P06K00	50- B5	AA		C
XEBSD30P06000	50- B6	AA		C
XEBSD30P08000	50- B7	AA		C
XEBSD30P10000	50- B14	AA		C
XEBSF30P08000	50- B8	AA		C
XEBSF30P12000	50- B9	AA		C
XEBSF30P40000	50- B10	AA		C
XJPSD30P04000	50- B11	AA		C
XUBSD20P06000	50- B12	AA		C
XWHSD30-08100	50- W2	AA		C
XWHSD40-08100	50- W1	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK

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